

Sequence Listing

- <110> Ashkenazi, Avi J.
 Baker, Kevin P.
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 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
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 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin
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 <211> 251
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110						115				120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125						130				135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140						145				150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
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Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170						175				180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185						190				195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200						205				210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215						220				225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
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<211> 1373

<212> DNA

<213> Homo sapiens

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 taaagcaatg atggtccaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgcct aaccgatggc 700

Arg Ile Ile Gln Glu Arg Asn Gly Val Leu Pro Asp Cys Leu Thr
155 165

Asp Gly Ser Asp Val Val Ser Asp Leu Glu His Glu Glu Met Lys
170 175 180

Ile Leu Arg Glu Val Leu Arg Lys Ser Lys Glu Glu Tyr Asp Gln
185 190 195

Glu Glu Glu Arg Lys Arg Lys Lys Gln Leu Ser Glu Ala Lys Thr
200 205 210

Glu Glu Pro Thr Val His Ser Ser Glu Ala Ala Ile Met Asn Asn
215 220 225

Ser Gln Gly Asp Gly Glu His Phe Ala His Pro Pro Ser Glu Val
230 235 240

Lys Met His Phe Ala Asn Gln Ser Ile Glu Pro Leu Gly Arg Lys
245 250 255

Val Glu Arg Ser Glu Thr Ser Ser Leu Pro Gln Lys Gly Leu Lys
260 265 270

Ile Pro Gly Leu Glu His Ala Ser Ile Glu Gly Pro Ile Ala Asn
275 280 285

Leu Ser Val Leu Gly Thr Glu Glu Leu Arg Gln Arg Glu His Tyr
290 295 300

Leu Lys Gln Lys Arg Asp Lys Leu Met Ser Met Arg Lys Asp Met
305 310 315

Arg Thr Lys Gln Ile Gln Asn Met Glu Gln Lys Gly Lys Pro Thr
320 325 330

Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu
335 340 345

Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu
350 355 360

Lys Glu Glu Val Ile Asn Lys
365

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<211> 418
<212> DNA
<213> Homo sapiens

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aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
tgcacttctc ctcttgcaaa gaccatata tcacaggcca tttttgcaac 200
ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
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gaggaatatg accaggaa 418

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 10
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<210> 11
<211> 23
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 11
ctaagaactt ccctcaggat ttt 23

<210> 12
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<220>
<223> Synthetic oligonucleotide probe

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<210> 13
<211> 2886
<212> DNA
<213> Homo sapiens

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cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 200
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<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

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Thr	Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser
				20					25					30
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40					45
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55					60
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70					75
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100					105
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
				110					115					120

Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
125		130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg	Leu Asn Trp Ile	Gln
140		145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser	Ile Val Ala Leu	Thr
155		160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu	Ala Gly Arg Gly	Phe
170		175	180
His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu	Phe
185		190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu	Trp
200		205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe	Ser
215		220	225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln	Cys
230		235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu	Lys
245		250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser	Lys
260		265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly	Leu
275		280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn	Cys Gly Phe Phe	Tyr
290		295	300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile	Phe Val Thr Ala	Phe
305		310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn	Met
320		325	330
Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr	Thr
335		340	345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe	Phe
350		355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile	Phe Ile Tyr Asn	Ala
365		370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg	Ile
380		385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg	Ser Ser Gly Asp	Gly
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Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys	Ser Asp Glu Ser	Asp
410		415	420
Glu Asp Thr Phe			

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<211> 755
<212> DNA
<213> Homo sapiens

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cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgcgtgaa gaggcgtota aactggatcc agtgggcttc 700
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<210> 16
<211> 20
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 17
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<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttccagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

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<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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<210> 20

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Ala	Ser	Ala	Asn	Pro	35	Pro	Gly	Pro	Ala	Trp	40	Val	Ala	Leu	Cys	Pro	45
Gly	Ser	Ser	Ser	Pro	50	Arg	Pro	Trp	Pro	Ser	55	Leu	Pro	Thr	Ser	Ser	60
Ser	Gly	Ser	Cys	Pro	65	Thr	Ser	His	Thr	Ala	70	Arg	Pro	Ile	Gly	Thr	75
Cys	Phe	Ser	Ile	Ala	80	Ser	Leu	Lys	Gln	Trp	85	Ser	Arg	Val	Ser	Met	90
Phe	Pro	Thr	Arg	Leu	95	Ser	Pro	Cys	Ser	Ser	100	Ala	Thr	Glu	Gln	Thr	105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val Leu	110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly Gln	125	130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val Ala	140	145	150
Ser Gln Ser Ala	Asn His Thr His Gly	Thr Thr Ser His Arg Glu	155	160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys Ile	170	175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu Gln	185	190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr Phe	200	205	210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys Leu	215	220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val Glu	230	235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg Asn	245	250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr Leu	260	265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys Lys	275	280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu Ile	290	295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala Val	305	310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu Pro	320	325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys Gln	335	340	345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr Val	350	355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser Thr	365	370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser Gln	380	385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met Ala	395	400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met Tyr	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450
 Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
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 accctatgaa gccacgacgt ctgagccaat cgctacttc cggggcctac 150
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttctc 200
 ttccacctct tggctttcat gctgggtggag gggaaacttg tcttgttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctcttgacca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggtttgcca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcacc ttgggtggcc tcattggagag taacctcacc attacatatg 450
 cggtagctgt ggcagctggc atcagtgctg cagctgcctt cttactacc 500
 tgggtccatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550
 ottccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
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 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 ctctcttcag cccttgtaat ttggacatct gctgcttcca tattttcata 200
 cattactgca gtaaacctcc accatataga ccggccttta ccttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gottatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaag 400
 ctggccttgt acttggaata ctgagttggt taggacttcc tattgtggca 450

aacttcacaga aaacaaccct ttttctgtgca catgtaagtg gagctgtgct 500
taccttttgg atgggctcat tatatatgtt tgttcagacc atccttttcc 550
accaaatagca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttggctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
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tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctca tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
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atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
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Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile
				140					145					150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp
				155					160					165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu
				170					175					180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp
				185					190					195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala
				200					205					210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr
				215					220					225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn
				230					235					240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn
				245					250					255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile				
				260					265					

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
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 gagcggagat cctcaaacgg cctagtgcct cgcgcttcg gagaaaatca 150
 gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtag acgttcctgt tgagtacacg 250
 ttctgttga tttacaaaag gtgcaggtat gagcaggtct gaagactaac 300
 attttgtgaa gttgtaaaac agaaaacctg ttgaaatgt ggtggtttca 350
 gcaaggctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccog 450
 gctttacett atatcagtga cactggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
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ctgccccgcg ggccgggggtg cggagccgac atgcgcocgc ttctcggcct 100
ccttctgtgc ttgcgcggct gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcggaga ctgggctoca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctcoga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctactgttgc ctgctcttct 300
gcggcgccta cctctacaaa cagggtcttg ccattcccg ctcacagcttc 350
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cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
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 gccaggcggt gtggcaggca cctgtaatcc cagctactcg ggagcggtgag 1300
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 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu 215 225
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys 230 235 240
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala 245 250 255
 Asn His Ile His Ser Arg Lys Asp Thr 260

<210> 29

<211> 1292

<212> DNA

<213> Homo sapiens

<400> 29

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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctccagagacc cccccgcgag tatctctctc ttatagttgt gtataagggt 350
 ctgcgaacct tgggattaat ctgtctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
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 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
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 cctatttato attggcagcg gtgaggccat gttgcagctc atccctccct 1050
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 gatatcggt atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttgtgca tctgcgatgg aaccgcttcc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
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 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345
 Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgtgtccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtggtgc atgtcagaga aggcaattga 300
 aaaattttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400
 ttaattcttc tcactgccta ctttggtatt caaccttca gccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
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 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgccctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
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ccggaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
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 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acaactccat 600
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 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
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 cccgggacac cacgtgcatg gtgtggcgcc tctgcatca ggtggtctg 2650
 tcagtaggcc tggcaccaaa gccgtgtag gtctgtatg ggcagggg 2700
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 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150
 gggcctggag gatggcaagc tcactgtggt ggtcgcgggg cagccctctg 3200
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtg ctgcgcgcgc 3250
 atctcccagg tgtcctcggg agagacggaa tacaacccta ctgagcgccg 3300
 ctgaacctgg ccagtccggc tgctcggggc ccgccccggg caggcctggc 3350
 ccgggagggc ccgccagaa gtcggcgggg aacccccggg gtgggcagcc 3400
 cagggggtga gcggggccca ccctgccagc ctcagggatt ggcgggcgat 3450

gttaccacct cagggattgg cgggcggaag tcccgccct cgcggctga 3500
 ggggccgccc tgaggccag cactggcgtc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
 1 5 10 15
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe Ile Asp Gln	Ala Asn Tyr Phe Leu	Asn Phe Pro Cys Lys Val
275		285
Gly Thr Thr Pro	Val Ser Ser Pro Ser	Gln Thr Pro Arg Pro Gln
290		300
Pro Gly Pro Ile	Pro Pro His Thr Gln	Val Arg Asn Gln Val Tyr
305		315
Ser Trp Leu Leu	Arg Leu Arg Pro Pro	Ser Gln Gly Tyr Leu Ser
320		330
Ser Arg Ser Pro	Gln Glu Met Leu Arg	Ala Ser Gly Leu Thr Gln
335		345
Lys Trp Val Gln	Arg Glu Ile Ser Asn	Phe Glu Tyr Leu Met Gln
350		360
Leu Asn Thr Ile	Ala Gly Arg Thr Tyr	Asn Asp Leu Ser Gln Tyr
365		375
Pro Val Phe Pro	Trp Val Leu Gln Asp	Tyr Val Ser Pro Thr Leu
380		390
Asp Leu Ser Asn	Pro Ala Val Phe Arg	Asp Leu Ser Lys Pro Ile
395		405
Gly Val Val Asn	Pro Lys His Ala Gln	Leu Val Arg Glu Lys Tyr
410		420
Glu Ser Phe Glu	Asp Pro Ala Gly Thr	Ile Asp Lys Phe His Tyr
425		435
Gly Thr His Tyr	Ser Asn Ala Ala Gly	Val Met His Tyr Leu Ile
440		450
Arg Val Glu Pro	Phe Thr Ser Leu His	Val Gln Leu Gln Ser Gly
455		465
Arg Phe Asp Cys	Ser Asp Arg Gln Phe	His Ser Val Ala Ala Ala
470		480
Trp Gln Ala Arg	Leu Glu Ser Pro Ala	Asp Val Lys Glu Leu Ile
485		495
Pro Glu Phe Phe	Tyr Phe Pro Asp Phe	Leu Glu Asn Gln Asn Gly
500		510
Phe Asp Leu Gly	Cys Leu Gln Leu Thr	Asn Glu Lys Val Gly Asp
515		525
Val Val Leu Pro	Pro Trp Ala Ser Ser	Pro Glu Asp Phe Ile Gln
530		540
Gln His Arg Gln	Ala Leu Glu Ser Glu	Tyr Val Ser Ala His Leu
545		555
His Glu Trp Ile	Asp Leu Ile Phe Gly	Tyr Lys Gln Arg Gly Pro
560		570
Ala Ala Glu Glu	Ala Leu Asn Val Phe	Tyr Tyr Cys Thr Tyr Glu
575		585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gly	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln	
				905							910			915	
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala	
				920					925					930	
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr	
				935					940					945	
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu	
				950					955					960	
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln	
				965					970					975	
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val	
				980					985					990	
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg			
				995					1000						

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctcgtgc ccagggctga 100
tgtgcgtctt ccagggttac tcatccaaag gcctaatacca acgttctgtc 150
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
actgggcctt ccacaagccc caggacatcc ctacctccc cttaatctct 300
gccttcaccc gcacactccg ttaccacact gggtcattgg catttgagac 350
cctcatcctg acccttgtgc agatagcccg ggtbatcttg gagtatatgt 400
accacaagct cagaggagtg cagaacctg tagcccgtg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttccataa 500
ccgcaatgca tacatcatga tcgccatcta cggaagaagt ttctgtgtct 550
cagccaaaaa tgcgttcatt ctactcatgc gaaacattgt cagggtggtc 600
gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt tttttctcc ggtcgcaccc 700
 cggggctggg taaagacttt aagagccccc acotcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcga gcggtctctt 800
 cagcgctttc ggcatgtgtg tggacacgct cttcctctgc ttctctggaag 850
 acctggagcg gaacaacggc tccctggacc ggccctaacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cgacaacaa 950
 gaagaggagag aagtacacgc tccggccctg atccaggact gcaccccacc 1000
 cccacgcctc agcatccaa cctcacttcg cttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccagggcggc tggctcacgc ctgtaacca 1100
 acactttgag aggctgaggc gggcggatca cctgagtcag gatttcgaga 1150
 ccagcctggc caacatgggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 ttgacggaga gtggtggcat gcacctgtca tccagctac tcgggaggct 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat ttatttaaag atattttgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1				5					10					15
Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys
 140 145
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe
 155 160
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn
 170 175
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn
 185 190
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
 200 205
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser
 215 220
 Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe
 230 235
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser
 245 250
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
 260 265
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu
 275 280
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
 290 295
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
 305 310
 Asn Lys Lys Arg Lys Lys
 320

<210> 37

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 37

tcgtgccag gggtgatgt gc 22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

gtctttacc agccccggga tgcg 24

<210> 39

<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacggttctgt cttcaatctg caaatctatg gggctcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagttcttgac cgcgcgccggg ctcttggtac ctcagcgga ggcgcaggcg 50
tccggccgcc gtggctatgt tcgtgtccga ttccgcgaaa gaggttctacg 100
agggtgtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag ttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
gctaatttag acctattgga tattcttcaa cctgatgaag acatatatt 350
ctttgtgtgt gactcccata ggcagtcgaa tgcgtgcaat gtatacaacg 400
atacccgatg caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgcaac cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcgccg agagtgggag 600
gcccgagaga gagacatcct ctttgactac gagcagtatg aatatcatg 650
gacatcgta gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggcctcag ttggactaac agaccagtgg 750
gtgcaagaca agatcaactc aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgctgt 900
gtgctctacc agcaactgtc cctccatgac agcctgtgca acaccagcta 950
taaccgagcc aggttcaagc tgtggtctgt gcatggacag aagcggtctc 1000
aggagttcct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgccgg aaatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccagcag 1350
 accattgccca gctgc 1365

<210> 41

<211> 566

<212> PRT

<213> Homo sapiens

<400> 41

Met	Phe	Val	Ser	Asp	Phe	Arg	Lys	Glu	Phe	Tyr	Glu	Val	Val	Gln	1	5	10	15
Ser	Gln	Arg	Val	Leu	Leu	Phe	Val	Ala	Ser	Asp	Val	Asp	Ala	Leu	20	25	30	
Cys	Ala	Cys	Lys	Ile	Leu	Gln	Ala	Leu	Phe	Gln	Cys	Asp	His	Val	35	40	45	
Gln	Tyr	Thr	Leu	Val	Pro	Val	Ser	Gly	Trp	Gln	Glu	Leu	Glu	Thr	50	55	60	
Ala	Phe	Leu	Glu	His	Lys	Glu	Gln	Phe	His	Tyr	Phe	Ile	Leu	Ile	65	70	75	
Asn	Cys	Gly	Ala	Asn	Val	Asp	Leu	Leu	Asp	Ile	Leu	Gln	Pro	Asp	80	85	90	
Glu	Asp	Thr	Ile	Phe	Phe	Val	Cys	Asp	Ser	His	Arg	Pro	Val	Asn	95	100	105	
Val	Val	Asn	Val	Tyr	Asn	Asp	Thr	Gln	Ile	Lys	Leu	Leu	Ile	Lys	110	115	120	
Gln	Asp	Asp	Asp	Leu	Glu	Val	Pro	Ala	Tyr	Glu	Asp	Ile	Phe	Arg	125	130	135	
Asp	Glu	Glu	Glu	Asp	Glu	Glu	His	Ser	Gly	Asn	Asp	Ser	Asp	Gly	140	145	150	
Ser	Glu	Pro	Ser	Glu	Lys	Arg	Thr	Arg	Leu	Glu	Glu	Glu	Ile	Val	155	160	165	
Glu	Gln	Thr	Met	Arg	Arg	Arg	Gln	Arg	Arg	Glu	Trp	Glu	Ala	Arg	170	175	180	
Arg	Arg	Asp	Ile	Leu	Phe	Asp	Tyr	Glu	Gln	Tyr	Glu	Tyr	His	Gly	185	190	195	
Thr	Ser	Ser	Ala	Met	Val	Met	Phe	Glu	Leu	Ala	Trp	Met	Leu	Ser	200	205	210	
Lys	Asp	Leu	Asn	Asp	Met	Leu	Trp	Trp	Ala	Ile	Val	Gly	Leu	Thr	215	220	225	
Asp	Gln	Trp	Val	Gln	Asp	Lys	Ile	Thr	Gln	Met	Lys	Tyr	Val	Thr	230	235	240	
Asp	Val	Gly	Val	Leu	Gln	Arg	His	Val	Ser	Arg	His	Asn	His	Arg				

245	250	255
Asn Glu Asp Glu Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile	
260	265	270
Ser Phe Glu Tyr Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser	
275	280	285
Leu His Asp Ser Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe	
290	295	300
Lys Leu Trp Ser Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu	
305	310	315
Ala Asp Met Gly Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln	
320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu	
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr	
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp	
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp	
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser	
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys	
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys	
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu	
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser	
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser	
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala	
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val	Thr Val Val Gly Ile Pro	
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala	
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn	
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser	
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu Leu Ser		

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
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 cagatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttgctc cagtgtgacc angtgcaata tangetgggt ccagtttctg 200
 ggtggcaaga acttgaaaact gcatttcttg agcataaaga acagtttcat 250
 tattttatct tcataaaactg tggagctaat gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgta 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaacccct ctctttgggt ctggattggg accccctttcc agtaccattt 50
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaagaa 150
 aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
 gagtcaagaa acccccccctt cttagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccgggtcac catggtgaca gccgccctgg gtcccgctcg 300
 ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atgggtggagc 350
 tcaccttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 cccccagcc ctgctgaga tcagacctta cattaatat accatctga 500
 aggggtgaca aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
 agggagggtc cccaaggga gcctggccct cagggcagca agggtgacaa 600
 gggggagatg ggcagccccg ggcgccctg ccagaagcgc ttcttcgctc 650
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 gaccggccag ttgtctgctc cctgcgtgg catctacttc ttcagcctca 800
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
 cagaaagagg ctgtcatctc gtacgcgcag ccagcgagc gcagcatcat 900
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<213> Homo sapiens

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<223> Signal Peptide

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<222> 72-75

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<222> 144-178, 78-111, 84-117

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Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp
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Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg
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Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile
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Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys
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Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu
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His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Phe	Phe	Glu	Arg	Val	Phe
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Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala
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Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser
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Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys
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Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
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 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

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Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
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 actaattgtg gtttttgcca ttgaaatggc attgaaataa aagtgtaaag 3300
 aaatctatac cagatgtagt aacagtgggt tgggtctggg aggttggtatt 3350
 acaggggagca ttgtatttct atgttgtgta tttctataat gtttgaattg 3400
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 tttttacagc ct 3462

<210> 57

<211> 811

<212> PRT

<213> Homo sapiens

<400> 57

Met Arg Leu Ile Arg Asn Ile Tyr Ile Phe Cys Ser Ile Val Met
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 Thr Ala Glu Gly Asp Ala Pro Glu Leu Pro Glu Glu Arg Glu Leu
 20 25 30
 Met Thr Asn Cys Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp
 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90

Thr Phe Glu Phe	Asn Lys Glu Leu Arg	Tyr Leu Asp Leu Ser	Asn
95	100	105	
Asn Arg Leu Lys	Ser Val Thr Trp Tyr	Leu Leu Ala Gly Leu Arg	
110	115	120	
Tyr Leu Asp Leu	Ser Phe Asn Asp Phe	Asp Thr Met Pro Ile Cys	
125	130	135	
Glu Glu Ala Gly	Asn Met Ser His Leu	Glu Ile Leu Gly Leu Ser	
140	145	150	
Gly Ala Lys Ile	Gln Lys Ser Asp Phe	Gln Lys Ile Ala His Leu	
155	160	165	
His Leu Asn Thr	Val Phe Leu Gly Phe	Arg Thr Leu Pro His Tyr	
170	175	180	
Glu Glu Gly Ser	Leu Pro Ile Leu Asn	Thr Thr Lys Leu His Ile	
185	190	195	
Val Leu Pro Met	Asp Thr Asn Phe Trp	Val Leu Leu Arg Asp Gly	
200	205	210	
Ile Lys Thr Ser	Lys Ile Leu Glu Met	Thr Asn Ile Asp Gly Lys	
215	220	225	
Ser Gln Phe Val	Ser Tyr Glu Met Gln	Arg Asn Leu Ser Leu Glu	
230	235	240	
Asn Ala Lys Thr	Ser Val Leu Leu Leu	Asn Lys Val Asp Leu Leu	
245	250	255	
Trp Asp Asp Leu	Phe Leu Ile Leu Gln	Phe Val Trp His Thr Ser	
260	265	270	
Val Glu His Phe	Gln Ile Arg Asn Val	Thr Phe Gly Gly Lys Ala	
275	280	285	
Tyr Leu Asp His	Asn Ser Phe Asp Tyr	Ser Asn Thr Val Met Arg	
290	295	300	
Thr Ile Lys Leu	Glu His Val His Phe	Arg Val Phe Tyr Ile Gln	
305	310	315	
Gln Asp Lys Ile	Tyr Leu Leu Leu Thr	Lys Met Asp Ile Glu Asn	
320	325	330	
Leu Thr Ile Ser	Asn Ala Gln Met Pro	His Met Leu Phe Pro Asn	
335	340	345	
Tyr Pro Thr Lys	Phe Gln Tyr Leu Asn	Phe Ala Asn Asn Ile Leu	
350	355	360	
Thr Asp Glu Leu	Phe Lys Arg Thr Ile	Gln Leu Pro His Leu Lys	
365	370	375	
Thr Leu Ile Leu	Asn Gly Asn Lys Leu	Glu Thr Leu Ser Leu Val	
380	385	390	
Ser Cys Phe Ala	Asn Asn Thr Pro Leu	Glu His Leu Asp Leu Ser	
395	400	405	

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	410	415	420
Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	425	430	435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	440	445	450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	455	460	465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	710	715	720

Asn Ser Asp His	Ile Ile Leu Ile Leu	Leu Glu Pro Ile Pro	Phe
725		730	735
Tyr Cys Ile Pro	Thr Arg Tyr His Lys	Leu Lys Ala Leu Leu	Glu
740		745	750
Lys Lys Ala Tyr	Leu Glu Trp Pro Lys	Asp Arg Arg Lys Cys	Gly
755		760	765
Leu Phe Trp Ala	Asn Leu Arg Ala Ala	Ile Asn Val Asn Val	Leu
770		775	780
Ala Thr Arg Glu	Met Tyr Glu Leu Gln	Thr Phe Thr Glu Leu	Asn
785		790	795
Glu Glu Ser Arg	Gly Ser Thr Ile Ser	Leu Met Arg Thr Asp	Cys
800		805	810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaatg 50

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
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 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62

<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

Met	Ser	Arg	Pro	Gly	Thr	Ala	Thr	Pro	Ala	Leu	Ala	Leu	Val	Leu
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Leu	Ala	Val	Thr	Leu	Ala	Gly	Val	Gly	Ala	Gln	Gly	Ala	Ala	Leu
				20					25					30
Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro
				35					40					45
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro
				50					55					60
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu
				65					70					75
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys
				80					85					90
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser
				95					100					105
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn
				110					115					120
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser
				125					130					135
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln
				140					145					150
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg
				155					160					165
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr
				170					175					180
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile

	185		190		195
Glu Val Asp Ala	Arg Arg Leu Thr Arg	Phe Thr Gly Val Ile Thr			
	200		205		210
Gln Gly Arg Asn	Ser Leu Trp Leu Ser	Asp Trp Val Thr Ser Tyr			
	215		220		225
Lys Val Met Val	Ser Asn Asp Ser His	Thr Trp Val Thr Val Lys			
	230		235		240
Asn Gly Ser Gly	Asp Met Ile Phe Glu	Gly Asn Ser Glu Lys Glu			
	245		250		255
Ile Pro Val Leu	Asn Glu Leu Pro Val	Pro Met Val Ala Arg Tyr			
	260		265		270
Ile Arg Ile Asn	Pro Gln Ser Trp Phe	Asp Asn Gly Ser Ile Cys			
	275		280		285
Met Arg Met Glu	Ile Leu Gly Cys Pro	Leu Pro Asp Pro Asn Asn			
	290		295		300
Tyr Tyr His Arg	Arg Asn Glu Met Thr	Thr Thr Asp Asp Leu Asp			
	305		310		315
Phe Lys His His	Asn Tyr Lys Glu Met	Arg Gln Leu Met Lys Val			
	320		325		330
Val Asn Glu Met	Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly			
	335		340		345
Lys Ser His Gln	Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp			
	350		355		360
His Pro Gly Glu	His Glu Val Gly Glu	Pro Glu Phe His Tyr Ile			
	365		370		375
Ala Gly Ala His	Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu			
	380		385		390
Leu Leu Val Gln	Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala			
	395		400		405
Arg Ile Val His	Leu Val Glu Glu Thr	Arg Ile His Val Leu Pro			
	410		415		420
Ser Leu Asn Pro	Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser			
	425		430		435
Glu Leu Gly Gly	Trp Ser Leu Gly Arg	Thr His Asp Gly Ile			
	440		445		450
Asp Ile Asn Asn	Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu			
	455		460		465
Ala Glu Asp Arg	Gln Asn Val Pro Arg	Lys Val Pro Asn His Tyr			
	470		475		480
Ile Ala Ile Pro	Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala			
	485		490		495
Ala Glu Thr Arg	Ala Val Ile Ala Trp	Met Glu Lys Ile Pro Phe			

500	505	510
Val Leu Gly Gly 515	Asn Leu Gln Gly Gly 520	Glu Leu Val Val Ala Tyr 525
Pro Tyr Asp Leu Val 530	Arg Ser Pro Trp Lys 535	Thr Gln Glu His Thr 540
Pro Thr Pro Asp 545	Asp His Val Phe Arg Trp 550	Leu Ala Tyr Ser Tyr 555
Ala Ser Thr His 560	Arg Leu Met Thr Asp 565	Arg Arg Arg Val Cys 570
His Thr Glu Asp 575	Phe Gln Lys Glu Glu Gly 580	Thr Val Asn Gly Ala 585
Ser Trp His Thr 590	Val Ala Gly Ser Leu Asn 595	Asp Phe Ser Tyr Leu 600
His Thr Asn Cys 605	Phe Glu Leu Ser Ile Tyr 610	Val Gly Cys Asp Lys 615
Tyr Pro His Glu 620	Ser Gln Leu Pro Glu Glu 625	Trp Glu Asn Asn Arg 630
Glu Ser Leu Ile 635	Val Phe Met Glu Gln Val 640	His Arg Gly Ile Lys 645
Gly Leu Val Arg 650	Asp Ser His Gly Lys Gly 655	Ile Pro Asn Ala Ile 660
Ile Ser Val Glu 665	Gly Ile Asn His Asp Ile 670	Arg Thr Ala Asn Asp 675
Gly Asp Tyr Trp 680	Arg Leu Leu Asn Pro Gly 685	Glu Tyr Val Val Thr 690
Ala Lys Ala Glu 695	Gly Phe Thr Ala Ser Thr 700	Lys Asn Cys Met Val 705
Gly Tyr Asp Met 710	Gly Ala Thr Arg Cys Asp 715	Phe Thr Leu Ser Lys 720
Thr Asn Met Ala 725	Arg Ile Arg Glu Ile Met 730	Glu Lys Phe Gly Lys 735
Gln Pro Val Ser 740	Leu Pro Ala Arg Arg Leu 745	Lys Leu Arg Gly Arg 750
Lys Arg Arg Gln 755	Arg Gly	

<210> 63
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 63
 gttctcaatg agctaccggt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
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 acttactaac caattccacc cccacccaac cccctcttac tgctactttt 2350
 aaaaaaatta atagttttct atggaactga tctaagatta gaaaaattaa 2400
 ttttctttaa tttoattatg gacttttatt tacatgactc taagactata 2450
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aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattg 2550
aatttttggc tttgtttaag cctggaactt gtaagaaaaa gaaaatttaa 2600
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cttttgaaatg actttatcat ctagtctttg tctatttttc ctttgatgtt 2750
caagtctatg tctataggat tggcagttta aatgctttac tccccctttt 2800
aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67

<211> 510

<212> PRT

<213> Homo sapiens

<400> 67

Met	Arg	Pro	Gly	Leu	Ser	Phe	Leu	Leu	Ala	Leu	Leu	Phe	Phe	Leu	1	5	10	15
Gly	Gln	Ala	Ala	Gly	Asp	Leu	Gly	Asp	Val	Gly	Pro	Pro	Ile	Pro	20	25	30	35
Ser	Pro	Gly	Phe	Ser	Ser	Phe	Pro	Gly	Val	Asp	Ser	Ser	Ser	Ser	35	40	45	50
Phe	Ser	Ser	Ser	Ser	Arg	Ser	Gly	Ser	Ser	Ser	Arg	Ser	Leu	Pro	50	55	60	65
Gly	Ser	Gly	Gly	Ser	Val	Ser	Gln	Leu	Phe	Ser	Asn	Phe	Thr	Gly	65	70	75	80
Ser	Val	Asp	Asp	Arg	Gly	Thr	Cys	Gln	Cys	Ser	Val	Ser	Leu	Pro	80	85	90	95
Asp	Thr	Thr	Phe	Pro	Val	Asp	Arg	Val	Glu	Arg	Leu	Glu	Phe	Thr	95	100	105	110
Ala	His	Val	Leu	Ser	Gln	Lys	Phe	Glu	Lys	Glu	Leu	Ser	Lys	Val	110	115	120	125
Arg	Glu	Tyr	Val	Gln	Leu	Ile	Ser	Val	Tyr	Glu	Lys	Lys	Leu	Leu	125	130	135	140
Asn	Leu	Thr	Val	Arg	Ile	Asp	Ile	Met	Glu	Lys	Asp	Thr	Ile	Ser	140	145	150	155
Tyr	Thr	Glu	Leu	Asp	Phe	Glu	Leu	Ile	Lys	Val	Glu	Val	Lys	Glu	155	160	165	170
Met	Glu	Lys	Leu	Val	Ile	Gln	Leu	Lys	Glu	Ser	Phe	Gly	Gly	Ser	170	175	180	185
Ser	Glu	Ile	Val	Asp	Gln	Leu	Glu	Val	Glu	Ile	Arg	Asn	Met	Thr	185	190	195	200
Leu	Leu	Val	Glu	Lys	Leu	Glu	Thr	Leu	Asp	Lys	Asn	Asn	Val	Leu	200	205	210	

Ala Ile Arg Arg	Glu Ile Val Ala Leu Lys Thr Lys Leu Lys Glu	215	220	225
Cys Glu Ala Ser	Lys Asp Gln Asn Thr Pro Val Val His Pro Pro	230	235	240
Pro Thr Pro Gly	Ser Cys Gly His Gly Gly Val Val Asn Ile Ser	245	250	255
Lys Pro Ser Val	Val Gln Leu Asn Trp Arg Gly Phe Ser Tyr Leu	260	265	270
Tyr Gly Ala Trp	Gly Arg Asp Tyr Ser Pro Gln His Pro Asn Lys	275	280	285
Gly Leu Tyr Trp	Val Ala Pro Leu Asn Thr Asp Gly Arg Leu Leu	290	295	300
Glu Tyr Tyr Arg	Leu Tyr Asn Thr Leu Asp Asp Leu Leu Leu Tyr	305	310	315
Ile Asn Ala Arg	Glu Leu Arg Ile Thr Tyr Gly Gln Gly Ser Gly	320	325	330
Thr Ala Val Tyr	Asn Asn Asn Met Tyr Val Asn Met Tyr Asn Thr	335	340	345
Gly Asn Ile Ala	Arg Val Asn Leu Thr Thr Asn Thr Ile Ala Val	350	355	360
Thr Gln Thr Leu	Pro Asn Ala Ala Tyr Asn Asn Arg Phe Ser Tyr	365	370	375
Ala Asn Val Ala	Trp Gln Asp Ile Asp Phe Ala Val Asp Glu Asn	380	385	390
Gly Leu Trp Val	Ile Tyr Ser Thr Glu Ala Ser Thr Gly Asn Met	395	400	405
Val Ile Ser Lys	Leu Asn Asp Thr Thr Leu Gln Val Leu Asn Thr	410	415	420
Trp Tyr Thr Lys	Gln Tyr Lys Pro Ser Ala Ser Asn Ala Phe Met	425	430	435
Val Cys Gly Val	Leu Tyr Ala Thr Arg Thr Met Asn Thr Arg Thr	440	445	450
Glu Glu Ile Phe	Tyr Tyr Asp Thr Asn Thr Gly Lys Glu Gly	455	460	465
Lys Leu Asp Ile	Val Met His Lys Met Gln Glu Lys Val Gln Ser	470	475	480
Ile Asn Tyr Asn	Pro Phe Asp Gln Lys Leu Tyr Val Tyr Asn Asp	485	490	495
Gly Tyr Leu Leu	Asn Tyr Asp Leu Ser Val Leu Gln Lys Pro Gln	500	505	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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cttatctata tgggtgcttg ggtagggtt actctcccca gcatccaaac 200
aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga ttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtgttac agcagtttac 350
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72
 tctcgagat agtaaataat ctcgaaagg cgagaaagaa gctgtctcca 50
 tcttgtctgt atccgctgct cttgtgacgt tgtggagatg ggggagctcc 100
 tggggctgtg ctccatggcg agctggatac catgtttgtg tgggaagtcc 150
 ccgtgtttgc tatgccgatg ctgtcctagt ggaacaact ccactgtaac 200
 tagattgatc tatgcacttt tcttgcttgt tggagtatgt gtgacttgtg 250
 taatgttgat accaggaatg gaagaacaac tgaataagat tctggattt 300
 tgtgagaatg agaaagggtg tgtcccttgt aacattttgg ttgctataa 350
 agctgtatat cgtttgtgct ttggtttggc tatgttctat ctctctctc 400
 ctttactaat gatcaaatg aagagtagca gtgatcctag agctgcagtg 450
 cacaatggat ttggttctt taaatttgcg gcagcaattg caattattat 500
 tggggcattc ttcatccag aaggaaactt tacaactgtg tggttttatg 550
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 attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
 agggaaactg agatgttggt atgcagcctt gttatcagct acagctctga 700
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 cctctcgctt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
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 ctttcacttc atgcttttcc tggcttcaet ttatatcatg atgaccotta 1300
 ccaactggtc caggatgaa ccctctcgtg agatgaaaag tcaagtggaca 1350
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 aaatgtatgg ctgccctttg aaatatttga tgtgttgccct ggcaggatac 1850
 tgcagaagaac atggtttatt ttaaaattta taaacaagtc acttaaatgc 1900
 cagttgtctg aaaaatctta taaggtttta ccttgatac ggaatttaca 1950
 caggtagggg gtgttttagtg gacaatagtg taggttatgg atggagggtg 2000
 cgttactaaa ttgaataacg agtaataaat cttacttggg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggttg ttttaaactc atgaagtatg 2100
 ggttcagtgg aaatgtttgg aactctgaag gatttagaca aggttttgaa 2150
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 cacatgggtg acctgttcta taaaaataat ctggctttga gcatatgcct 2350
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 gttgcagtga gcaagtcacg tcaactgcact ctactggcca cagagtaagc 2450
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 catgacccat aaacagggtc gaagaatgat ggaatgtttt agaataaact 2800
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

Met	Gly	Ser	Val	Leu	Gly	Leu	Cys	Ser	Met	Ala	Ser	Trp	Ile	Pro
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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro
				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
				440					445					450	

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 cggtgtggag atggggagcg tcctctggggc tgtgtccat gccgagctgg 100
 ataccatgtt tgtgtggaag tgcccogtgt ttgctatgcc gatgtgtgcc 150
 tagtggaac aantocactg taactagatt gatctatgca cttttcttgc 200
 ttgttgtagt atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgtgtgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgcttttggt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt ontggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcaact 150
ttntttgctt gttggagtan gtgtagcttg tgtaattgtg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaagg 250
gttgccctt gtaacatttt ggttggtctat aaagctgtat atngttttgtg 300
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaa 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatattg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatggggg gcgtccttgg ggttgtgctc catggcgagc tggataccat 100
gtttgtgtgg aagtgccttg tgtttgctat gccgatgctg tcctagtggga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt ccoctgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtctat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtcgac aatggatttt ggttctttaa atttgctgca 450
gcaattgcaa ttattattgg gcc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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actttttcct tgcttgttgg agtatgtgta gctttgtgta atgttgttcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtgtt gtcccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggtttgg ctatgttcta tcttctcttc tctttactaa 250
tgatcaaatg gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
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cagggtgcct ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatogtc ctgttctttg tctactacac tcatccagcc 600
agttgttcag aaaacaaggc gtccatcagt gtcaaatgc tcctctgogt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgcgc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccaactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtggga aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
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cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taactgttca ttacgagggg 200
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aatccacat ctgtttcaac tctccgcga gggcgagcag gagcgagagt 500
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gacgcaactt gagactccg catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcoctgtgct gtgettgtctg tccgcaactg 650
 tgtttccctt gctgggtgga agctcgcoct tcoctgtcga ccaccgcoctg 700
 aaaggcaggt tttagaggga ccgcaggaac atccgcccc aatcatcctt 750
 ggtgtgtgag gacgaccagg atgtggagct gggttccatg caggtgatga 800
 acaagaccgg gcgcatcatg gagcagggcg gggcgactt catcaagcc 850
 ttcgtgacca caccatgtg ctgccccca cgtctccca tectcactgg 900
 caagtaactc cacaaccaca acacctacac caacaatgag aactgtctct 950
 cgcoctcctg gcaggcacag cagagagcc gcaccttgc cgtgtacctt 1000
 aatagcaactg gctaccggag agctttcttc gggaagtatc ttaatgaata 1050
 caacggctcc tacgtgccac ccggctggaa ggagtgggtc ggactcctta 1100
 aaaactcccg cttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150
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<210> 84

<211> 867

<212> PRT

<213> Homo sapiens

<400> 84

Met	Gly	Pro	Pro	Ser	Leu	Val	Leu	Cys	Leu	Leu	Ser	Ala	Thr	Val	1	5	10	15
Phe	Ser	Leu	Leu	Gly	Gly	Ser	Ser	Ala	Phe	Leu	Ser	His	His	Arg	20	25	30	
Leu	Lys	Gly	Arg	Phe	Gln	Arg	Asp	Arg	Arg	Asn	Ile	Arg	Pro	Asn	35	40	45	
Ile	Ile	Leu	Val	Leu	Thr	Asp	Asp	Gln	Asp	Val	Glu	Leu	Gly	Ser	50	55	60	
Met	Gln	Val	Met	Asn	Lys	Thr	Arg	Arg	Ile	Met	Glu	Gln	Gly	Gly	65	70	75	
Ala	His	Phe	Ile	Asn	Ala	Phe	Val	Thr	Thr	Pro	Met	Cys	Cys	Pro	80	85	90	
Ser	Arg	Ser	Ser	Ile	Leu	Thr	Gly	Lys	Tyr	Val	His	Asn	His	Asn	95	100	105	
Thr	Tyr	Thr	Asn	Asn	Glu	Asn	Cys	Ser	Ser	Pro	Ser	Trp	Gln	Ala	110	115	120	
Gln	His	Glu	Ser	Arg	Thr	Phe	Ala	Val	Tyr	Leu	Asn	Ser	Thr	Gly	125	130	135	
Tyr	Arg	Thr	Ala	Phe	Phe	Gly	Lys	Tyr	Leu	Asn	Glu	Tyr	Asn	Gly	140	145	150	
Ser	Tyr	Val	Pro	Pro	Gly	Trp	Lys	Glu	Trp	Val	Gly	Leu	Leu	Lys	155	160	165	
Asn	Ser	Arg	Phe	Tyr	Asn	Tyr	Thr	Leu	Cys	Arg	Asn	Gly	Val	Lys	170	175	180	
Glu	Lys	His	Gly	Ser	Asp	Tyr	Ser	Lys	Asp	Tyr	Leu	Thr	Asp	Leu	185	190	195	
Ile	Thr	Asn	Asp	Ser	Val	Ser	Phe	Phe	Arg	Thr	Ser	Lys	Lys	Met	200	205	210	
Tyr	Pro	His	Arg	Pro	Val	Leu	Met	Val	Ile	Ser	His	Ala	Ala	Pro	215	220	225	
His	Gly	Pro	Glu	Asp	Ser	Ala	Pro	Gln	Tyr	Ser	Arg	Leu	Phe	Pro	230	235	240	
Asn	Ala	Ser	Gln	His	Ile	Thr	Pro	Ser	Tyr	Asn	Tyr	Ala	Pro	Asn	245	250	255	

Pro Asp Lys His	Trp Ile Met Arg Tyr	Thr Gly Pro Met Lys	Pro
	260	265	270
Ile His Met Glu	Phe Thr Asn Met Leu	Gln Arg Lys Arg Leu	Gln
	275	280	285
Thr Leu Met Ser	Val Asp Asp Ser Met	Glu Thr Ile Tyr Asn	Met
	290	295	300
Leu Val Glu Thr	Gly Glu Leu Asp Asn	Thr Tyr Ile Val Tyr	Thr
	305	310	315
Ala Asp His Gly	Tyr His Ile Gly Gln	Phe Gly Leu Val Lys	Gly
	320	325	330
Lys Ser Met Pro	Tyr Glu Phe Asp Ile	Arg Val Pro Phe Tyr	Val
	335	340	345
Arg Gly Pro Asn	Val Glu Ala Gly Cys	Leu Asn Pro His Ile	Val
	350	355	360
Leu Asn Ile Asp	Leu Ala Pro Thr Ile	Leu Asp Ile Ala Gly	Leu
	365	370	375
Asp Ile Pro Ala	Asp Met Asp Gly Lys	Ser Ile Leu Lys Leu	Leu
	380	385	390
Asp Thr Glu Arg	Pro Val Asn Arg Phe	His Leu Lys Lys Lys	Met
	395	400	405
Arg Val Trp Arg	Asp Ser Phe Leu Val	Glu Arg Gly Lys Leu	Leu
	410	415	420
His Lys Arg Asp	Asn Asp Lys Val Asp	Ala Gln Glu Glu Asn	Phe
	425	430	435
Leu Pro Lys Tyr	Gln Arg Val Lys Asp	Leu Cys Gln Arg Ala	Glu
	440	445	450
Tyr Gln Thr Ala	Cys Glu Gln Leu Gly	Gln Lys Trp Gln Cys	Val
	455	460	465
Glu Asp Ala Thr	Gly Lys Leu Lys Leu	His Lys Cys Lys Gly	Pro
	470	475	480
Met Arg Leu Gly	Gly Ser Arg Ala Leu	Ser Asn Leu Val Pro	Lys
	485	490	495
Tyr Tyr Gly Gln	Gly Ser Glu Ala Cys	Thr Cys Asp Ser Gly	Asp
	500	505	510
Tyr Lys Leu Ser	Leu Ala Gly Arg Arg	Lys Lys Leu Phe Lys	Lys
	515	520	525
Lys Tyr Lys Ala	Ser Tyr Val Arg Ser	Arg Ser Ile Arg Ser	Val
	530	535	540
Ala Ile Glu Val	Asp Gly Arg Val Tyr	His Val Gly Leu Gly	Asp
	545	550	555
Ala Ala Gln Pro	Arg Asn Leu Thr Lys	Arg His Trp Pro Gly	Ala
	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	845	850	855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				860	865	

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 <212> DNA

<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 85
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<211> 18
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<223> Synthetic oligonucleotide probe
<400> 86
ggccagctat ctccgcag 18
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<223> Synthetic oligonucleotide probe
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aagggcctgc aagagaag 18
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cactgggaca actgtggg 18
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<223> Synthetic oligonucleotide probe
<400> 90
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<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
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<210> 92
<211> 24
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<220>
<223> Synthetic oligonucleotide probe

<400> 92
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<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

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gtggcggtcc tgctgctgct gctgctgctg gccacctgcc ttttccacgg 200
acggcaggac tgtgacgtgg agaggaacgc tacagctgca gggggaaccc 250
gagtcgcccg ggcccagcct tggcccttcc ggccggcgggg ccacctggga 300
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 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
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 aaaaaaaaa aaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
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 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggctacaag 200
 ttccacatgg ggctctatgg tgagactggg cggcttttca ctgagagctg 250
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 cccagggtc ccgcccctgt tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
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 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
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<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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 ctgaggctgt gtcgaaacc gaaagtccc tccgaccct ccaagtggag 200
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cacgcttcac atacactaca cggaagcctt gtagatgga cgtattattg 300
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<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

Met	Thr	Leu	Arg	Pro	Ser	Leu	Leu	Pro	Leu	His	Leu	Leu	Leu	Leu	15
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Leu	Leu	Leu	Ser	Ala	Ala	Val	Cys	Arg	Ala	Glu	Ala	Gly	Leu	Glu	30
			20						25						
Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu	45
			35						40						
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu	60
			50						55						
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp	75
			65						70						
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys	90
			80						85						
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val	105
			95						100						
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly	120
			110						115						
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln	135
			125						130						
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu	150
			140						145						
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val	165
			155						160						
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala	180
			170						175						
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Asn Lys Ser Lys Lys Lys
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<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

<400> 100

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gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atgaaaaacg gggatttcca 450
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tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
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<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

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accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tbtgggagag aagcgaaggc caatcattcc 250
ttctcacttg gctatggaa aacggggatt tccacctctc gtcccagcgg 300
atgcagtggt gcagtatgac gtggagctga ttgcactaat ccagaccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctctgggcc toattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaacg 500
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 102

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 ccactgcacg acgggggttg actgacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatccacca tgaaagattt caaccactca 300
 taccatgect gtgggtgttat agcaaccata gccttcttaa tgattaatgc 350
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tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150

Arg Thr Glu Asp Leu Trp Gln
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<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggatttcta gagggttga gatgctcaga atgcattgac tggggggaaa 150

agcgaataac tattgtctcc attgctgctg gtgtactatt ttttacaggc 200

tgggtgatta tcatagatgc agctgttatt tatccacca tgaaagattt 250

caaccactca taccatgctt gtgggtgttat agcaaccata gccttcttaa 300

tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagttaa 350

gggtgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcattctat gtggattctt tttggaggtt 450
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cagaatgcct tcattctttt tggagggctg gtttttaagt ttggc 545

<210> 105
<211> 490
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 39, 108, 145, 179, 219, 412, 479
<223> unknown base

<400> 105
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agaatgcatt actgggggaa aagcgcaaat actattgctt ccattgctgc 100
tgggtanta ttttttacag gctggtggat tatcatagat gcagntgtta 150
tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
ccgaggtgat agttacagtg aaggttggtt gggcaaca ggtgctcgca 300
tttggtcttt cgttggtttc atgttggcct ttggatctct gattgcatct 350
atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
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tggtttttaa gtttgccgc actgaagant tatggcagt 490

<210> 106
<211> 466
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449
<223> unknown base

<400> 106
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acagggtggt ggattatcat agatgcagct gttatttate ccaccatgaa 200
agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250
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agtgaaggtt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450
atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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ttatnataga tgcagctgtt atttatccca ccattgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaaggtgtgt 250

tgggtcaaa aggtgntngc atttggcttt tngttggttt catgttggcc 300

tttgatctn tgattgcatt tatgtggatt ntttttgag gttatgttcg 350

taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

tttatcccac catgaaagat ttoaaccact cataccatgc ctgtggtgtt 300

atagcaacca tagccttctt aatgattaat gcagtatoga atggacaagt 350

ccgagggtgat agttacagt aaggttgtct gggtcaaaaca ggtgctogca 400

tttggtttt cgttggttct atgttggcct ttggatntct gattgcactc 450

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ccctggaatt gctgtatatt tccagaatgc ctctcatntt tttggagggc 550

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<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tgttgtgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
gtgtctggag gctgtggcgg ttttgttttc ttgggctaaa atcggg 46

<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
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ccgaatcett tctccgaaga tgtcaaacgg ccccagcgc ccctggtaac 150
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200
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<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	115	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	130	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	145	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	160	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	175	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	190	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	205	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	220	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	235	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	250	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	265	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	280	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	295	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	310	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	325	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	340	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	355	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	370	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	385	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	400	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	415	420

Glu Arg Tyr Val	Ser Met Pro Arg	Glu Glu Ala Ala	Glu His Ile
	425		430
Pro Leu Leu Phe	Phe Ala Phe Pro	Ser Ala Lys Asp	Pro Thr Trp
	440		445
Glu Asp Arg Phe	Pro Gly Arg Ser	Thr Met Ile Met	Leu Ile Pro
	455		460
Thr Ala Tyr Glu	Trp Phe Glu Glu	Trp Gln Ala Glu	Leu Lys Gly
	470		475
Lys Arg Gly Ser	Asp Tyr Glu Thr	Phe Lys Asn Ser	Phe Val Glu
	485		490
Ala Ser Met Ser	Val Val Leu Lys	Leu Phe Pro Gln	Leu Glu Gly
	500		505
Lys Val Glu Ser	Val Thr Ala Gly	Ser Pro Leu Thr	Asn Gln Phe
	515		520
Tyr Leu Ala Ala	Pro Arg Gly Ala	Cys Tyr Gly Ala	Asp His Asp
	530		535
Leu Gly Arg Leu	His Pro Cys Val	Met Ala Ser Leu	Arg Ala Gln
	545		550
Ser Pro Ile Pro	Asn Leu Tyr Leu	Thr Gly Gln Asp	Ile Phe Thr
	560		565
Cys Gly Leu Val	Gly Ala Leu Gln	Gly Ala Leu Leu	Cys Ser Ser
	575		580
Ala Ile Leu Lys	Arg Asn Leu Tyr	Ser Asp Leu Lys	Asn Leu Asp
	590		595
Ser Arg Ile Arg	Ala Gln Lys Lys	Lys Asn	
	605		610

<210> 114

<211> 1701

<212> DNA

<213> Homo sapiens

<400> 114

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<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met	Arg	Val	Arg	Ile	Gly	Leu	Thr	Leu	Leu	Leu	Cys	Ala	Val	Leu
1					5					10				15

Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
				20						25				30

Glu Ser Leu Asp	Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val	35	40	45
Lys Asp His Thr	Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe	50	55	60
Leu Asp Ser Glu	Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu	65	70	75
Glu Asp Ser Leu	Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp	80	85	90
Ile Ser Phe Leu	Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu	95	100	105
Glu Pro Lys Lys	Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly	110	115	120
Thr Ala His Gly	Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp	125	130	135
Lys Glu Tyr Asp	Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg	140	145	150
Leu Trp Cys Ala	Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp	155	160	165
Gly Phe Cys Glu	Thr Glu Glu Glu Ala Ala Lys Arg Arg Gln Met	170	175	180
Gln Glu Ala Glu	Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn	185	190	195
Gly Ser Asn Lys	Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu	200	205	210
Gln Lys Ala Ala	Ser Met Asn His Thr Lys Ala Leu Glu Arg Val	215	220	225
Ser Tyr Ala Leu	Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln	230	235	240
Ala Ala Arg Glu	Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro	245	250	255
Lys Gly Gln Thr	Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly	260	265	270
Val Asn Ser Ser	Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly	275	280	285
Ala Leu Gly Gly	Asn Leu Ile Ala His Met Val Leu Val Ser Arg	290	295	300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 116

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 aggggtgggg tgtgagatgg gtgcctcccc tetgctccc atttctgcc 500
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<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln 45
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg 60
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu 75
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala 90
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val 105
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly 120
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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 aa 3402

<210> 119

<211> 504

<212> PRT

<213> Homo sapiens

<400> 119

Met	Thr	Pro	Ser	Pro	Leu	Leu	Leu	Leu	Leu	Pro	Pro	Leu	Leu	1	5	10	15	
Leu	Gly	Ala	Phe	Pro	Pro	Ala	Ala	Ala	Ala	Arg	Gly	Pro	Pro	Lys	20	25	30	
Met	Ala	Asp	Lys	Val	Val	Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	35	40	45	
Thr	Val	Arg	Leu	Gln	Cys	Pro	Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	50	55	60	
Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg	Thr	Ile	His	Ser	Gly	Trp	Ser	65	70	75	
Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu	Lys	Val	Lys	Gln	Val	Glu	80	85	90	
Arg	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys	Ala	Thr	Asn	Gly	Phe	95	100	105	
Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	110	115	120	
Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly	Pro	Asp	Ser	Ser	Ser	Gly	Gly	125	130	135	
Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg	Phe	Thr	140	145	150	
Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val	Gly	155	160	165	
Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro	170	175	180	
Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr	Arg	Pro	Glu	185	190	195	
Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210	
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225	
Arg	Ala	Gly	Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	230	235	240	

Arg Thr Arg Ser	Lys Pro Val Leu Thr	Gly Thr His Pro Val Asn
	245	250 255
Thr Thr Val Asp	Phe Gly Gly Thr Thr	Ser Phe Gln Cys Lys Val
	260	265 270
Arg Ser Asp Val	Lys Pro Val Ile Gln	Trp Leu Lys Arg Val Glu
	275	280 285
Tyr Gly Ala Glu	Gly Arg His Asn Ser	Thr Ile Asp Val Gly Gly
	290	295 300
Gln Lys Phe Val	Val Leu Pro Thr Gly	Asp Val Trp Ser Arg Pro
	305	310 315
Asp Gly Ser Tyr	Leu Asn Lys Leu Leu	Ile Thr Arg Ala Arg Gln
	320	325 330
Asp Asp Ala Gly	Met Tyr Ile Cys Leu	Gly Ala Asn Thr Met Gly
	335	340 345
Tyr Ser Phe Arg	Ser Ala Phe Leu Thr	Val Leu Pro Asp Pro Lys
	350	355 360
Pro Pro Gly Pro	Pro Val Ala Ser Ser	Ser Ser Ala Thr Ser Leu
	365	370 375
Pro Trp Pro Val	Val Ile Gly Ile Pro	Ala Gly Ala Val Phe Ile
	380	385 390
Leu Gly Thr Leu	Leu Leu Trp Leu Cys	Gln Ala Gln Lys Lys Pro
	395	400 405
Cys Thr Pro Ala	Pro Ala Pro Pro Leu	Pro Gly His Arg Pro Pro
	410	415 420
Gly Thr Ala Arg	Asp Arg Ser Gly Asp	Lys Asp Leu Pro Ser Leu
	425	430 435
Ala Ala Leu Ser	Ala Gly Pro Gly Val	Gly Leu Cys Glu Glu His
	440	445 450
Gly Ser Pro Ala	Ala Pro Gln His Leu	Leu Gly Pro Gly Pro Val
	455	460 465
Ala Gly Pro Lys	Leu Tyr Pro Lys Leu	Tyr Thr Asp Ile His Thr
	470	475 480
His Thr His Thr	His Ser His Thr His	Ser His Val Glu Gly Lys
	485	490 495
Val His Gln His	Ile His Tyr Gln Cys	
	500	

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

ccgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcgccaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgtgtctct gctgccgccc ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

Met	Val	Gly	Thr	Lys	Ala	Trp	Val	Phe	Ser	Phe	Leu	Val	Leu	Glu
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Val	Thr	Ser	Val	Leu	Gly	Arg	Gln	Thr	Met	Leu	Thr	Gln	Ser	Val
				20					25					30
Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys
				35					40					45
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe
				50					55					60
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp
				65					70					75
Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu
				80					85					90
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr
				95					100					105
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu
				110					115					120
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val
				125					130					135
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg
				140					145					150
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys
				155					160					165
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu
				170					175					180
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys
				185					190					195
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly
				200					205					210

Gln Val Asn Ala	Asp Cys Asp Ala Cys	Met Cys Gln Asp Phe Met	215	225
Leu His Gly Ala	Val Ser Leu Pro Gly	Gly Ala Pro Ala Ser Gly	230	240
Ala Ala Ile Tyr	Leu Leu Thr Lys Thr	Pro Lys Leu Leu Thr Gln	245	255
Thr Asp Ser Asp	Gly Arg Phe Arg Ile	Pro Gly Leu Cys Pro Asp	260	270
Gly Lys Ser Ile	Leu Lys Ile Thr Lys	Val Lys Phe Ala Pro Ile	275	285
Val Leu Thr Met	Pro Lys Thr Ser Leu	Lys Ala Ala Thr Ile Lys	290	300
Ala Glu Phe Val	Arg Ala Glu Thr Pro	Tyr Met Val Met Asn Pro	305	315
Glu Thr Lys Ala	Arg Arg Ala Gly Gln	Ser Val Ser Leu Cys Cys	320	330
Lys Ala Thr Gly	Lys Pro Arg Pro Asp	Lys Tyr Phe Trp Tyr His	335	345
Asn Asp Thr Leu	Leu Asp Pro Ser Leu	Tyr Lys His Glu Ser Lys	350	360
Leu Val Leu Arg	Lys Leu Gln Gln His	Gln Ala Gly Glu Tyr Phe	365	375
Cys Lys Ala Gln	Ser Asp Ala Gly Ala	Val Lys Ser Lys Val Ala	380	390
Gln Leu Ile Val	Thr Ala Ser Asp Glu	Thr Pro Cys Asn Pro Val	395	405
Pro Glu Ser Tyr	Leu Ile Arg Leu Pro	His Asp Cys Phe Gln Asn	410	420
Ala Thr Asn Ser	Phe Tyr Tyr Asp Val	Gly Arg Cys Pro Val Lys	425	435
Thr Cys Ala Gly	Gln Gln Asp Asn Gly	Ile Arg Cys Arg Asp Ala	440	450
Val Gln Asn Cys	Cys Gly Ile Ser Lys	Thr Glu Glu Arg Glu Ile	455	465
Gln Cys Ser Gly	Tyr Thr Leu Pro Thr	Lys Val Ala Lys Glu Cys	470	480
Ser Cys Gln Arg	Cys Thr Glu Thr Arg	Ser Ile Val Arg Gly Arg	485	495
Val Ser Ala Ala	Asp Asn Gly Glu Pro	Met Arg Phe Gly His Val	500	510
Tyr Met Gly Asn	Ser Arg Val Ser Met	Thr Gly Tyr Lys Gly Thr	515	525

Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Ieu Val Leu	Thr
	530	535	540
Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val	Leu
	545	550	555
Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys	Met
	560	565	570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr	Asn
	575	580	585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala	Glu
	590	595	600
Leu Glu Ile Pro	Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu	Pro
	605	610	615
Tyr Ile Gly Lys	Val Lys Ala Ser Val	Thr Phe Leu Asp Pro	Arg
	620	625	630
Asn Ile Ser Thr	Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe	Ile
	635	640	645
Asn Asp Glu Gly	Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met	Phe
	650	655	660
Ser Val Asp Phe	Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn	Ala
	665	670	675
Gly Lys Val Lys	Val His Leu Asp Ser	Thr Gln Val Lys Met	Pro
	680	685	690
Glu His Ile Ser	Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp	Thr
	695	700	705
Gly Leu Trp Glu	Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln	Arg
	710	715	720
Arg Asn Lys Arg	Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu	Glu
	725	730	735
Ile Arg Glu Arg	Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser	Arg
	740	745	750
Arg Cys Phe Val	Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe	Leu
	755	760	765
Pro Ser Glu Gln	Ile Gln Gly Val Val	Ile Ser Val Ile Asn	Leu
	770	775	780
Glu Pro Arg Thr	Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly	Arg
	785	790	795
Phe Asp Ser Val	Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro	Ala
	800	805	810
Phe Cys Asp Asp	Gln Ser Pro Asp Ala	Tyr Ser Ala Tyr Val	Leu
	815	820	825
Ala Ser Leu Ala	Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser	Pro
	830	835	840

Lys Phe Asn Pro	Asn Ala Ile Gly Val	Pro Gln Pro Tyr Leu Asn
845		855
Lys Leu Asn Tyr	Arg Arg Thr Asp His	Glu Asp Pro Arg Val Lys
860		870
Lys Thr Ala Phe	Gln Ile Ser Met Ala Lys	Pro Arg Pro Asn Ser
875		885
Ala Glu Glu Ser	Asn Gly Pro Ile Tyr Ala	Phe Glu Asn Leu Arg
890		900
Ala Cys Glu Glu	Ala Pro Pro Ser Ala Ala	His Phe Arg Phe Tyr
905		915
Gln Ile Glu Gly	Asp Arg Tyr Asp Tyr	Asn Thr Val Pro Phe Asn
920		930
Glu Asp Asp Pro	Met Ser Trp Thr Glu	Asp Tyr Leu Ala Trp Trp
935		945
Pro Lys Pro Met	Glu Phe Arg Ala Cys	Tyr Ile Lys Val Lys Ile
950		960
Val Gly Pro Leu	Glu Val Asn Val Arg Ser	Arg Asn Met Gly Gly
965		975
Thr His Arg Arg	Thr Val Gly Lys Leu Tyr	Gly Ile Arg Asp Val
980		990
Arg Ser Thr Arg	Asp Arg Asp Gln Pro Asn	Val Ser Ala Ala Cys
995		1005
Leu Glu Phe Lys	Cys Ser Gly Met Leu Tyr	Asp Gln Asp Arg Val
1010		1020
Asp Arg Thr Leu	Val Lys Val Ile Pro Gln	Gly Ser Cys Arg Arg
1025		1035
Ala Ser Val Asn	Pro Met Leu His Glu Tyr	Leu Val Asn His Leu
1040		1050
Pro Leu Ala Val	Asn Asn Asp Thr Ser Glu	Tyr Thr Met Leu Ala
1055		1065
Pro Leu Asp Pro	Leu Gly His Asn Tyr Gly	Ile Tyr Thr Val Thr
1070		1080
Asp Gln Asp Pro	Arg Thr Ala Lys Glu Ile	Ala Leu Gly Arg Cys
1085		1095
Phe Asp Gly Thr	Ser Asp Gly Ser Ser Arg	Ile Met Lys Ser Asn
1100		1110
Val Gly Val Ala	Leu Thr Phe Asn Cys Val	Glu Arg Gln Val Gly
1115		1125
Arg Gln Ser Ala	Phe Gln Tyr Leu Gln Ser	Thr Pro Ala Gln Ser
1130		1140
Pro Ala Ala Gly	Thr Val Gln Gly Arg Val	Pro Ser Arg Arg Gln
1145		1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

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<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

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<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ccattgtgca ggtcaggcca cag 23

<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtggtca gactgggggc 40

<210> 128

<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

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 ctacctacco gtacgcatac atacatatgt gtatatatat gtaactaga 200
 caaagatcgc agatcataaa gaaagctctg ctttagtttc caagaagatt 250
 acaaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300
 ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

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 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgcgagt 550
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 cagcactgag tccagtgcga gcacacaccc actatacaag agtgggtata 2250
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 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
				80					85					90
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr

125	130	135
Leu Ser Trp Ser Lys Thr Ile Glu Leu Thr Asp Asn Ile Val Ile		
140	145	150
Thr Phe Glu Ser Gly Arg Pro Asp Gln Met Ile Leu Glu Lys Ser		
155	160	165
Leu Asp Tyr Gly Arg Thr Trp Gln Pro Tyr Gln Tyr Tyr Ala Thr		
170	175	180
Asp Cys Leu Asp Ala Phe His Met Asp Pro Lys Ser Val Lys Asp		
185	190	195
Leu Ser Gln His Thr Val Leu Glu Ile Ile Cys Thr Glu Glu Tyr		
200	205	210
Ser Thr Gly Tyr Thr Thr Asn Ser Lys Ile Ile His Phe Glu Ile		
215	220	225
Lys Asp Arg Phe Ala Leu Phe Ala Gly Pro Arg Leu Arg Asn Met		
230	235	240
Ala Ser Leu Tyr Gly Gln Leu Asp Thr Thr Lys Lys Leu Arg Asp		
245	250	255
Phe Phe Thr Val Thr Asp Leu Arg Ile Arg Leu Leu Arg Pro Ala		
260	265	270
Val Gly Glu Ile Phe Val Asp Glu Leu His Leu Ala Arg Tyr Phe		
275	280	285
Tyr Ala Ile Ser Asp Ile Lys Val Arg Gly Arg Cys Lys Cys Asn		
290	295	300
Leu His Ala Thr Val Cys Val Tyr Asp Asn Ser Lys Leu Thr Cys		
305	310	315
Glu Cys Glu His Asn Thr Thr Gly Pro Asp Cys Gly Lys Cys Lys		
320	325	330
Lys Asn Tyr Gln Gly Arg Pro Trp Ser Pro Gly Ser Tyr Leu Pro		
335	340	345
Ile Pro Lys Gly Thr Ala Asn Thr Cys Ile Pro Ser Ile Ser Ser		
350	355	360
Ile Gly Thr Asn Val Cys Asp Asn Glu Leu Leu His Cys Gln Asn		
365	370	375
Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala		
380	385	390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly		
395	400	405
Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr		
410	415	420
Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro		
425	430	435
Leu Val Phe		

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggc acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctcggetacg gaattggctt cctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
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ccgggcgagg tgtectcatg acttctcttg tggaccatgt cctgatctt 150
ttttgctgc gtggtacggg taagggatgg actgccctc tcagcctcta 200
ctgattttta ccacacccaa gatTTTTTtg aatggaggag acggctcaag 250
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 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
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 aaatctaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

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Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20				25						30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35				40						45

Gln Tyr Pro Gly	Arg Gly Ser Ala Glu	Gly Cys Asp Phe Ser Ile	50	55	60
His Phe Ser Ser	Phe Gly Asp Val Ala	Cys Met Ala Ile Cys Ser	65	70	75
Cys Gln Cys Pro	Ala Ala Met Ala Phe	Cys Phe Leu Glu Thr Leu	80	85	90
Trp Trp Glu Phe	Thr Ala Ser Tyr Asp	Thr Thr Cys Ile Gly Leu	95	100	105
Ala Ser Arg Pro	Tyr Ala Phe Leu Glu	Phe Asp Ser Ile Ile Gln	110	115	120
Lys Val Lys Trp	His Phe Asn Tyr Val	Ser Ser Gln Met Glu	125	130	135
Cys Ser Leu Glu	Lys Ile Gln Glu Glu	Leu Lys Leu Gln Pro Pro	140	145	150
Ala Val Leu Thr	Leu Glu Asp Thr Asp	Val Ala Asn Gly Val Met	155	160	165
Asn Gly His Thr	Pro Met His Leu Glu	Pro Ala Pro Asn Phe Arg	170	175	180
Met Glu Pro Val	Thr Ala Leu Gly Ile	Leu Ser Leu Ile Leu Asn	185	190	195
Ile Met Cys Ala	Ala Leu Asn Leu Ile	Arg Gly Val His Leu Ala	200	205	210
Glu His Ser Leu	Gln Asp Pro Arg Ser	Trp Phe Cys Trp Leu Asp	215	220	225
Gln Thr Ser					

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
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 tcattoagaa agtgaagtgg cattttaact atgtaagttc cnttcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatggggg 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

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ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggc cggggcgtcc 150
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 gaggagagcc atctgcaact ttgcataatc tgagccagag tttgggacca 1950
 ggacctctct cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaagg gactgtggc caggcagagg 2150
 tcgggagata gattgtctcc ctgctctctg gccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg ctccagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
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Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
				20					25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
				35					40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
				50					55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
				65					70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
				80					85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
				95					100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
				110					115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

125					130					135																																																				
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu Val	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435						
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435									
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu Leu	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435												
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435															
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																		
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																					
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																								
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																											
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																														
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																																	
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																																				
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																																							
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																																										
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435																																													
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr	380	385	390	395	400	405	410	415	420	425	430	435																																																
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala	395	400	405	410	415	420	425	430	435																																																			
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu	410	415	420	425	430	435																																																						
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile	425	430	435																																																									
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys	435																																																											

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgcccag ggaaggccccc ttgggttggt cttggttgct tggcggcggc 50
 ggnttcntcc ccgctctgoc tcccggggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attocacgag aggatccgcg agtgatttat atcaacactt 200
 ctgtttgcaa cactgtacat cctctgccac atcttctga cccgttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggtggt gctgcccctt taaggggcgg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggetgcgag gaaaggcccc 150
 taggtgsggt ctggtgcttg gcggcggcgg cttcctcccc gttgtcntcc 200
 ccggggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatata aacacttctg ttgcaaacac tgtacatcnt 350
 ctgccacata ttctgacccc gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttacccctgg caattgccct ggggtgctgtc ctgctcctgc ccttctccat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagccccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
caaacctgtt ttggaattga ggaaacttct cttttgatct cagoccttgg 100
tgggccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150
gtcagtggaac agtttgcaag gacaccacagg ccattattt tccctccaggc 200
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc aggccagggt ctcctctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaa 500
 cgtctgggatt acagcttctg tgatctctga agctccactt tctgtgtttg 550
 aaggagactc tgtgttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta ttacaagaa tgataatgtc ctggcatctc ttaataaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
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 ccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcggcgcgg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250
 ggtgcctcga agtgctctta taaaggatat taaaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttcttttg ggattttggt 500
 ttcatgtttt gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550
 aagtgtatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca cccagctggg 700
 ccctggggcg ttccaaatga cccaggagggt ggtctgcgac gaatgcctca 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaaagtag aatagagcct 800
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
 cgtggtatgg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggctttgag atggaatatta ctacttgga 1000
 tggtcacaag gtacatatat cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggtcttt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaac gctactgaaa caagggtcag 1200
 tgcaagaagt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttggtgtg gttttgttt ttattttcaa tatgcaagtt aggcctaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400
 ccatttgcat tcgaaaaaga atgaccagca aaagggttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgtgcc gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaaaga acacaatata gaggggttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgtttttaaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
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Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
350 355

<210> 149
<211> 509
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
482
<223> unknown base

<400> 149
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gntgcgaccg aagcggcggtg cggaggaggt tttgaggatt tttggaacag 100
gaccocggaca gaggaacat ggttcgcag aacntgagca cnttttgcct 150
gttgntgnta tacttcacg gggcggtgat tgcgggacga gatttntata 200
agattttggg gtgcctngaa gtgcctnta taaagatat taaaaaggcc 250
tataggaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
acaagcccag gagaaattcc aggatttggg tgcgtcttat gaggttntgt 350
cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
aaagatggtg atcagagctc ccatggagac attttttcac acttnttttg 450
ggattttggt ttcagtgttg gaggaacccc tngtcagcaa gacagaaata 500
ttccaagag 509

<210> 150
<211> 1532
<212> DNA
<213> Homo sapiens

<400> 150
ggcagcaggc ggcggggcag tgcgggatg cgcccggtg ccacagcctg 50
aggccctcag gtctctgcag gtgtcgtgga ggaacctag acctgccatc 100
ctcttcccca atttgccact tocagcagct ttagcccatg aggagatgt 150
gaccgggact ggtcaggag cctctggaa gcatggagac gtgtggtgatt 200
gttgccatag gtgtgctggc caccatcttt ctggtctcgt ttgcagcctt 250
ggtgctgtgtg tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagacccag 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400
 cattgagccc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
 tcatgtccca ctgcattgcc atcttgaaga tttgtcacac ttgacagag 500
 aagcttggtg ccatgacaat gggctctggg gccaatgatg agacttcagc 550
 cagtgtcagc gacatcattg tgggtggcaa gcggatcagc cccagggtgg 600
 atgatgtgtg gaagtcgatg taccctccgt tggaccccaa actcctggac 650
 gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgtcgtgtac 700
 aaggaatgoc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
 tgtcggctgc tgaggagcat ttggaagtcc ttocagaagc agccctagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gtctgcaatt tagtgccctac aggcacagcag ctagccatga aggccctcgc 900
 cgccatccct ggatggctca gcttagcctt ctacttttcc ctatagagtt 950
 agttgttctc caccgctgga gagttcagct gtgtgtgcat agtaaacgag 1000
 gagatccccc tcagttttatg cctcttttgc agttgcaaac tgtggctggt 1050
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 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
 tcttcttttg gcaagaactg tactctctca cctggcctgt ttcattttatt 1350
 tgtattatct gcttggtccc tgaggcgtct ggtctctccc tctcccttgc 1400
 aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
 tctttatgcc tgcattttta ctagctacc actaggtgga tagtaaat 1500
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
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Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
 20 25 30

Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met	Glu Thr Gln Ser	Glu Pro Ser
50	50	55	60
Glu Leu Glu Leu	Asp Asp Val Val	Ile Thr Asn Pro	His Ile Glu
65	65	70	75
Ala Ile Leu Glu	Asn Glu Asp Trp	Ile Glu Asp Ala	Ser Gly Leu
80	80	85	90
Met Ser His Cys	Ile Ala Ile Leu	Lys Ile Cys His	Thr Leu Thr
95	95	100	105
Glu Lys Leu Val	Ala Met Thr Met	Gly Ser Gly Ala	Lys Met Lys
110	110	115	120
Thr Ser Ala Ser	Val Ser Asp Ile	Ile Val Val Ala	Lys Arg Ile
125	125	130	135
Ser Pro Arg Val	Asp Asp Val Val	Lys Ser Met Tyr	Pro Pro Leu
140	140	145	150
Asp Pro Lys Leu	Leu Asp Ala Arg	Thr Thr Ala Leu	Leu Leu Ser
155	155	160	165
Val Ser His Leu	Val Leu Val Thr	Arg Asn Ala Cys	His Leu Thr
170	170	175	180
Gly Gly Leu Asp	Trp Ile Asp Gln	Ser Leu Ser Ala	Ala Glu Glu
185	185	190	195
His Leu Glu Val	Leu Arg Glu Ala	Ala Leu Ala Ser	Glu Pro Asp
200	200	205	210
Lys Gly Leu Pro	Gly Pro Glu Gly	Phe Leu Gln Glu	Gln Ser Ala
215	215	220	225
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tcgcgcgtgt ccccaaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tggtccttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggcctttt gtaattggtt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300

attttagtc cttattggtt ggcctttgat aggcattgat ttcgaaattt 350
 atggattttt tctctgttc aggggtttct ttcctgtcgt tgttggtt 400
 attagaagag tgccagtcct tggatccctc ctaaaatttac ctggaattag 450
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 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattatca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
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 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
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 ttagagaact gtggtgcctg tttctttct tttattttg aaggctcagg 850
 agcatccata ggcatttgc ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattacttt tttttngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
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 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 70
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135
Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
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ccactgcagc catgatctcc ttaacggaca cgcagaaaaa tggaatggga 150
ttaaccggat ttggagtgtt ttctctgttc ttggaatga ttctcttttt 200
tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggtttgg 250
cttttgttaa tggtttagaa agaacattca gattctcttt ccaaaaacat 300
aaaatgaaag ctacaggttt tttctgggtt ggtgtatttg tagtccttat 350
tggttggcct ttgataggca tgatcttcga aatttatgga tttttctctc 400
tgttc 405

<210> 155
<211> 1781
<212> DNA
<213> Homo sapiens

<400> 155
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aagagcgtcc acgcatcatg gacctcgcgg gactgtctga gtctcagttc 200
ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctcctcct ctggccatt aacaagcagc 300
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 gtgatgtcgc tggagtgggtg gtcgggcacg gaatgcacca tcttcacgga 400
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 tttgggtcgt tagggggctc caaggtcctg gccaaagaa agctggccta 550
 tgtcccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
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 ctccgggact accccgagaa gtatttttct ctgattcaat gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggt gcccgggcca 750
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 gccatcacgc tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcttaa 900
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 cagagacgcc catggtgccc ccccgcgccg cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtggtg gctctacact ttcttccagt tctgtgtcag 1150
 catgatcagg agcgggtctt cctgacgctt ggccagcttc atcctcgtct 1200
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 cctctgcata tcctccttag tgggacacgg tgacaaagcg tgggtgagcc 1400
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<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

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				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
				80					85					90
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
				95					100					105
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
				110					115					120
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
				125					130					135
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln
				140					145					150
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr
				155					160					165
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe
				170					175					180
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys
				185					190					195
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly
				200					205					210
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val
				215					220					225
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu
				230					235					240
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val
				245					250					255
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys
				260					265					270
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln
				275					280					285
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp	Ala
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met	Ile
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala	Asn Phe Ile Leu Val	Phe
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp	Met Ile Gly Val Thr	Glu
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln	Lys
365	370	375
Leu Asn Asp		

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
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 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
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 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccaa 400
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 acagggtacc tttagtggtt gccaatctgg gcatgtctga acaactgggt 550
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 acaaacacac agctctaata tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
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actacaacca ccattctgat gtagtagaca atctgacctt aatggtagaa 1000
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 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100
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 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
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 aaatttgcaa aacatcatct aaaatttaaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu
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Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Ala	Lys	Asn	Ser	Ile	
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Glu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser Asp Gln Ile	Met Thr Phe Arg Glu	Arg Leu Leu His Lys	Asn
	110	115	120
Leu Gln Glu His	Phe Ser Asn Gln Asp	Leu Val Phe Leu Leu	Leu
	125	130	135
Thr Pro Ser Ile	Ile Thr Glu Ser Cys	Ser Thr His Arg Leu	Glu
	140	145	150
His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val	Pro
	155	160	165
Leu Val Val Ala	Asn Leu Gly Met Ser	Glu Gln Leu Gly Tyr	Lys
	170	175	180
Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala	Val
	185	190	195
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu	Lys
	200	205	210
Glu Val His Lys	Ile Asn Glu Met Tyr	Ala Ser Leu Gln Glu	Glu
	215	220	225
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala	Val
	230	235	240
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile	Glu
	245	250	255
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn	Ile
	260	265	270
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu	Arg
	275	280	285
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met	Ser
	290	295	300
Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn	His
	305	310	315
His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His	Thr
	320	325	330
Asp Ile Pro Glu	Ala Ser Pro Ala Ser	Thr Pro Gln Ile Ile	Lys
	335	340	345
His Lys Ala Leu	Asp Leu Asp Asp Arg	Trp Gln Phe Lys Arg	Ser
	350	355	360
Arg Leu Leu Asp	Thr Gln Asp Lys Arg	Ser Lys Ala Asn Thr	Gly
	365	370	375
Ser Ser Asn Gln	Asp Lys Ala Ser Lys	Met Ser Ser Pro Glu	Thr
	380	385	390
Asp Glu Glu Ile	Glu Lys Met Lys Gly	Phe Gly Glu Tyr Ser	Arg
	395	400	405
Ser Pro Thr Phe			

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 gctagagggt cctttcaaca ttgaatcggt catggatccc atcagatgta 1450

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 aatttctcgt tccatctctg aaagtgcctt cagtgcctgc ttcagaccac 1600
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 ttttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
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 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
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<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

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Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30
Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	Asp	His	Leu	Lys	Ile	Cys				
				50					55						60				
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70						75				
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85						90				
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100						105				
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115						120				
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130						135				
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145						150				
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160						165				
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175						180				
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190						195				
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205						210				
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220						225				
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235						240				
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250						255				
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265						270				
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280						285				
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295						300				
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310						315				
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325						330				
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340						345				
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350	355	360
Phe Ser Ala Arg Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr	
365	370	375
Thr Ala Ala Gly Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys	
380	385	390
Glu Lys Leu Lys Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser	
395	400	405
Asn Val Cys Asn Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu	
410	415	420
Asp Asp Cys Trp Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala	
425	430	435
Val Thr Gly Asn Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val	
440	445	450
Gln Val Asp Thr Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile	
455	460	465
Met Ala Leu Arg Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn	
470	475	480
Gly Asn Asp Val Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly	
485	490	495
Glu Gly Ser Gly Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu	
500	505	510
Phe Asp Tyr Asn Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu	
515	520	525
Lys Ala Asp Ser Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu	
530	535	540
Leu Thr Val Phe Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp	
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtggta aacccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
 tcacatcgat gggatccatg accg 24

<210> 163
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 163
 ggtctctgga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
 <211> 870
 <212> DNA
 <213> Homo sapiens

<400> 164
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 ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
 cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
 atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
 ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
 gtgagtgcaa agattggttc ctgagagccc cgagaagaaa attcatgaca 350
 gtgtctgggc tgccaaagaa gcagtgcctc tgtgatcatt tcaagggcaa 400
 tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
 ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
 ctgcctttgt aggagctctg agcgccact cttccaatta aacattctca 550
 gccaaagaaga cagtgaacac acctaccaga cactcttctt ctcccacctc 600
 actctcccac tgtaccaccc cctaaatcat tccagtgtct tcaaaaagca 650
 tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttctctctc 700
 cgtcagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
 ctgaaagatt ccaggaaact gtagcttctc agctagtgtc atttaacctt 800
 aaatgcaatc aggaagtag caaacagaag tcaataaata tttttaaatg 850
 tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 165
 Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met	Val Ser Ser Ser	Leu Asn Pro Gly	Val Ala Arg
	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala	Ser Arg Arg Trp	Leu Gln Glu
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys	Asp Trp Phe Leu	Arg Ala Pro
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser	Gly Leu Pro Lys	Lys Gln Cys
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn	Val Lys Lys Thr	Arg His Gln
	80	85	90
Arg His His Arg	Lys Pro Asn Lys	His Ser Arg Ala	Cys Gln Glu
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg	Ser Phe Ala Leu	Pro Leu
	110	115	

<210> 166

<211> 551

<212> DNA

<213> Homo sapiens

<400> 166

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 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctcgcgt 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag ttgggtcca caagtcctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Val Leu	Val Leu Arg Leu	Thr Val Val Leu	Gly Leu Leu
1	5	10	15
Val Leu Phe Leu	Thr Cys Tyr Ala	Asp Asp Lys Pro	Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe				
	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala					
	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met					
	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys					
	80		85		

<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

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ggaagcacag ctcagagctg gctgccaatg gacatcctgg tcccaactcct 100

gcagctgctg gtgctgcttc ttacccctgcc cctgcacctc atggctctgc 150

tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200

gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250

cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300

tggagctggg ctgcggaacc ggagccaact ttcagtctca cccaccgggc 350

tgcagggtca cctgcctaga cccaaatccc cacttttgaga agttcctgac 400

aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450

ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500

gtctgcactc tgggtgtgtg ctctgtgcag agcccaagga aggtcctgca 550

ggaggtccgg agagtactga gaccgggagg tgtgtctttt ttctgggagc 600

atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650

gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700

ctggaaggat cttgagaacg cccagttctc cgaatccaa atggaacgac 750

agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800

gctgtcaaac aatctttccc aagctccaag gcactcattt gctccctccc 850

cagcctccaa ttagaacaag ccacccacca gctatctat cttccactga 900

gagggacctc gcagaatgag agaagacatt catgtaccac ctactagtcc 950

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gacagtgaaa aagctctact tctacgtga ccaggggagg aaacactagg 1050

acctgtgtt atctccaact gcaagtttct ggactagtct cccaacgttt 1100

gctcccaat gttgtccctt tcttctgttc ccatgggtaa getcctctcg 1150
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 tcatggtgcc tgcacccctg ccaagccccc ctgacctct ctccccacta 1250
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 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
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<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Val	Leu	Leu	Leu	
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Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Gly	Cys	Trp	Gln	Pro	
				20				25					30	
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro
				35				40					45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser
				50				55					60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu
				65				70					75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro
				80				85					90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys
				95				100					105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu
				110				115					120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp
				125				130					135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val
				140				145					150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg
				155				160					165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr
				170				175					180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp
				185				190					195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys
				200				205					210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln
				215				220					225	

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
260 265 270

Tyr Leu Pro Leu Arg Gly Thr
275

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

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agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150

agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgtc 200

ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttgtt 250

aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300

ttgtcccaaa tgctctccga catgcagtag atgggagaga agaggagatt 350

cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400

tataaacagc attcagcaca aactcgcgc caatgtgatt ttctacattg 450

ttactctcaa caatacagca gaccatctcc ggtctggct caacagtgat 500

tcctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaactttt 550

ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600

taacctttgc aaggttttac ttgccaatc tggttcccag cgcaagaag 650

gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700

ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750

gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800

aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850

catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900

tgacggaatg gaaacgacag aatataacta accaactgga aaaaatggatg 950

aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000

cacaacacct cctctgttta tcgtatttta tcaacagcac tctaccatcg 1050

atcctatgtg gaatgtccgc caccttggtt ccagtgctgg aaaacgatat 1100

tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaaa taaagtgaag cagaatttga actgtaagca agcattttctc 1300
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 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
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<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val	1	5	10	15
Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser	20	25	30	
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro	35	40	45	
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp	50	55	60	
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp	65	70	75	
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn	80	85	90	
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr	95	100	105	
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser	110	115	120	
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly	125	130	135	
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu	140	145	150	
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys	155	160	165	
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile	170	175	180	
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala				

185	190	195
Phe Ser Glu Asp Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg	
200	205	210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys	
215	220	225
Lys Glu Arg Ile Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser	
230	235	240
Phe Asn Pro Gly Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg	
245	250	255
Gln Asn Ile Thr Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val	
260	265	270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr	
275	280	285
Pro Pro Leu Leu Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp	
290	295	300
Pro Met Trp Asn Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg	
305	310	315
Tyr Ser Pro Gln Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn	
320	325	330
Gly His Leu Lys Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val	
335	340	345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu	
350	355	360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn	Ile Lys	
365	370	

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250
aacaatacag cagaccatnt cgggtcctgg ntcaacagtg attccctgaa 300
aagcatcaga tacaaaattg tcaattttga ccttaaaactt ttggaaggaa 350

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aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttacacccc 400
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catggatgat gatgtaattg tgcaaggatg tattcttgcc ctttacaata 500
cagcactgaa gccaggacat gcagctgcat ttccagaaga ttgtgattca 550
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<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgccggc 150
gctgagctgg caggcggggt cggggcgcgg gctgcacccg catctcctcc 200
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aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

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 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
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 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
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<210> 174

<211> 823

<212> DNA

<213> Homo sapiens

<400> 174

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<212> PRT

<213> Homo sapiens

<400> 175

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Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
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His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
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Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
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<211> 1660

<212> DNA

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 <212> PRT
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 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
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Glu Leu Phe Gln Ile Thr Asn Lys Ala	110	Ile Ser Ser Ala Pro	Phe 120
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Trp Val Leu Trp Val Ala Val Leu Leu	140	Ser Leu Gly Thr Ala	Gly 150
Ala Ala Gln Val Met Glu Gly Gly Gln	155	Val Glu Tyr Lys Pro	Leu 165
Ser Gly Ile Arg Tyr Met Trp Ser Tyr	170	His Leu Ile Gly Leu	Ile 180
Trp Thr Ser Glu Phe Ile Leu Ala Cys	185	Gln Gln Met Thr Ile	Ala 195
Gly Ala Val Val Thr Cys Tyr Phe Asn	200	Arg Ser Lys Asn Asp	Pro 210
Pro Asp His Pro Ile Leu Ser Ser Leu	215	Ser Ile Leu Phe Phe	Tyr 225
His Gln Gly Thr Val Val Lys Gly Ser	230	Phe Leu Ile Ser Val	Val 240
Arg Ile Pro Arg Ile Ile Val Met Tyr	245	Met Gln Asn Ala Leu	Lys 255
Glu Gln Gln His Gly Ala Leu Ser Arg	260	Tyr Leu Phe Arg Cys	Cys 270
Tyr Cys Cys Phe Trp Cys Leu Asp Lys	275	Tyr Leu Leu His Leu	Asn 285
Gln Asn Ala Tyr Thr Thr Thr Ala Ile	290	Asn Gly Thr Asp Phe	Cys 300
Thr Ser Ala Lys Asp Ala Phe Lys Ile	305	Leu Ser Lys Asn Ser	Ser 315
His Phe Thr Ser Ile Asn Cys Phe Gly	320	Asp Phe Ile Ile Phe	Leu 330
Gly Lys Val Leu Val Val Cys Phe Thr	335	Val Phe Gly Gly Leu	Met 345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln	350	Val Trp Ala Val Pro	Leu 360
Leu Leu Val Ala Phe Phe Ala Tyr Leu	365	Val Ala His Ser Phe	Leu 375
Ser Val Phe Glu Thr Val Leu Asp Ala	380	Leu Phe Leu Cys Phe	Ala 390
Val Asp Leu Glu Thr Asn Asp Gly Ser	395	Ser Glu Lys Pro Tyr	Phe 405
Met Asp Gln Glu Phe Leu Ser Phe Val		Lys Arg Ser Asn Lys	Leu

	410		415		420
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<211> 2773

<212> DNA

<213> Homo sapiens

<400> 178

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<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

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Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
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Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
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Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
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Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
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Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
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Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala					
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Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val					
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Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe					
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Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp					
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Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp					
				485					490					495					
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn					
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Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe					
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Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr					
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Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys					
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Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly					
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Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile					
				590					595					600					
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala					

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Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
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Val Pro Arg Ile Ile Gln Asn Ile Cys Thr	Glu Phe Asn Ser Gln	
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Pro Arg Asn

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<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

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Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu
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Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val
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Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn
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Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala
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Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro

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Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp Glu	Ser Arg Ser Asp Ile			
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val Leu	Thr Gly Lys Trp Val			
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly Val	Asp Ser Tyr Phe Glu			
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu Gln	Asp Lys Lys Leu Met			
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala Ile	Arg Asn Tyr Thr Arg			
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln Met	Tyr Lys Gly Thr Val			
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu Ala	Tyr Trp Pro Gly Leu			
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn Ala	Met Arg Thr Phe Leu			
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe Gly	Gly Leu Pro Glu Phe			
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val Glu	Lys Arg Glu Gly Tyr			
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser Ala	Met Tyr Leu Tyr Arg			
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu Leu	Gly Arg Asp Ala Val			
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val Glu	Cys Gly Phe Ala Thr			
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu Asp	Asn Arg Met Glu Ser			
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr Leu	Tyr Leu Leu Phe Asp			
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly Ser	Thr Phe Asp Ala Val			
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu Gly	Ala Gly Gly Tyr Ile			
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp Leu	Ala Ala Leu His Cys			

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met	
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys	
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly	
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys	
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro	
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser	
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctcgggtt tgggcagaaa ggaggtgct tcggagcccg cccctttctga 100
 gcttctcggg ccggtcttag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacccaa 250
 tgcagacttt cacaatgggt ctgaagaaa tctggacaag tcttttcagt 300
 tggtttttct acgcattgat tccatgtttg ctacacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgccctg gagaacacgt gtactattct 450
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccacgagc tggtgctcag tcaactgaag tctgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttogtgcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct taaatagaaa 650
 ctcaaccata cttaccogac ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc cccagtttga gttccttgtg 750
 gcctactgga ggaggagacc tgggtccgag gaacatgtca aaatgggtgag 800
 gagggggggt attccagtgc acctagaaac catggagcca ggggctgcac 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttccccgtgt 950
 actggccctg tttgcctttg ttggcttcat gctgatcctt gtggtcgtgc 1000
 cactgttctg ctggaaaatg ggccgggtgc tccagtactc ctgttgcccc 1050
 gtggtggtcc tcccagacac cttgaaaata accaatccac cccagaagt 1100
 aatcagctgc agaaggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctgagga actcctcagg gcctggatct cataggtttg cgggaaggcc 1200
 cagggtgaag cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgt tctgttttc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagaggc aggggtggtt 1350
 gtctaacaga aactgactg aggcctaggg gatgtgacct ctgactggg 1400
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcatccctt 1450
 cggctctaag tttctctatc tgtaatgggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccagc acttgcaagg ctgaggggaa actggtgaca ctctacagtc 1600
 tgactgatto agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggctt gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatgggtgt gagttcactt 1750
 caagcccaat gccgggtcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccacctgtgc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-29

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1				5					10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tctctgctgat gcacatctgg gtttgcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttcttgccgc gctctagaac aattcaggct tgcgtgcgac 100
 tagacctcag ctccaacata tgcattctga agaagatgg ctgagatgac 150
 agaatgcttt attttgaaa gaaacaatgt tctagggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtottt 250
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcttgagaa acagtgtact 400
 attctgtcga ataccagggg gagtacgaga gctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caaccttgt gtcagggccca 550
 cattgggtc acagacctca gcttgagca tctgaagca tccctttaat 600
 agaaactcaa ccactcttac ccgacctggg atggagatca ccaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagtcc 700
 ttgtggccta ntggaggagg ggcaacccc ttgcggcgca aggggttngc 750
 gaacccttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
ttctacgca ttgattccat gttgtctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggttg cggcgacggt 50
ggcagcggcg tggtgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggcc ccaccacttt aacgtgctcg ccttccctcg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct tggcccgcg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctgggtgccca tctgccttc aagtacctgg ccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
cagcgctcgt gaggaagctc atctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatccc cccacctgtg tgggggtgac 650
 caatgcaaac tcaaatgggtg cttcaagggtg agagacccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttt attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctccccacca 900
 aggccttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgccca gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaaggttta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taataatgaa agtatcctcc tcaaaaa 1227

<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

Met	Val	Ala	Ala	Thr	Val	Ala	Ala	Ala	Trp	Leu	Leu	Leu	Trp	Ala	1	5	10	15
Ala	Ala	Cys	Ala	Gln	Gln	Glu	Gln	Asp	Phe	Tyr	Asp	Phe	Lys	Ala	20	25	30	
Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	35	40	45	
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	50	55	60	
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly	65	70	75	
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	80	85	90	
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	95	100	105	
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	110	115	120	
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	125	130	135	
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	140	145	150	
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val				

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctggggc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaactgg tgcgctgga gaagtaccgc ggatcggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgccgggag ctccgggggtg 100
 ctggggggccc gggccgcctt ctctcggagt tggcaggaag ccaggttgca 150
 ggggtgccgc ttctcagtt ccagagaggt ggtcgcgatg gtctccacgc 200
 ccateggagg cctcagctac gttcagggtt gcacccaaaa gcactttaac 250
 agcaagactg tgggccaagt cctggagacc acagcacaga ggggtccaga 300
 acgagaggcc ttggtcgtcc tccatgaaga cgtcagggtg acctttgcc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaa gtagccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgtcatg cagttggcca ccgccaggc gggcatcatt ctggtgtctg 500
 tgaaccagc ctaccaggct atggaactgg agtatgtcct caagaagggt 550
 ggtgtcaagg ccttgtgtt ccccaagcaa ttcaagacc agcaatacta 600
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcac ctccggtggat 700
 gccoccttgc cggggaccct gtcctcggat gaagtgggtg ccgtcggcag 750
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 gccatgaccc catcaacatc cagttcacct cggggacaac aggcagcccc 850
 aagggggcca cctctccca ctacaacatt gtcaacaact ccaacatttt 900
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 tctgtcccaa cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000
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 atggatcccc cagcatgttc gtggacattc tgaaccagcc agacttctcc 1150
 agttatgaca tctcgacctg gtgtggaggt gtcattgtcg ggtccctcgc 1200
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
 tgggtggttc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300
 ttccctgagg acactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggg acgttgggaa 1400
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 agatcgtggg ccgctctaag gatgatgca tccggggtgg tgaagaatcc 1600
 taccocgcag agctcgagga cttctttcac acacacccga aggtgcagga 1650
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 gtttgtcaca aactaccccc tcaccatttc aggaagatc cagaaattca 1850
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctagatgtcc ccagcaccca gttctgagcc aggcacatca 2000

aattgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
 aactcgccgtg ggcacaaggt gccaaaaaggc aggagcctg cccaggccct 2100
 ccctcctgtc catccccac attccccctgt ctgtccttgt gatttggcat 2150
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

Met	Ala	Val	Tyr	Val	Gly	Met	Leu	Arg	Leu	Gly	Arg	Leu	Cys	Ala	1	5	10	15
Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser	20	25	30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	35	40	45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	50	55	60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	65	70	75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	80	85	90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	95	100	105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	110	115	120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	125	130	135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	140	145	150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	155	160	165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	170	175	180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	185	190	195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	200	205	210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	215	220	225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	230	235	240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His				

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser Pro	
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn	Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His	Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met	Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys	Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys	

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
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 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
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 gtgacattcg cgcaattccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcgcatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
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 agggocctga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgag cggggcgttg acgtctgcac 200
 cgaggccgtg ggggcggtgg agaccatcca cggacaattc tcgctggcag 250
 tgccggggtt cggttcggga ctcccggca agaattgacc cggcctggat 300
 ctccacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgccc aacggcgtag agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgcc gggatcacg ccgcggtcg tgagctgcta 500
 caacgcgcag gatcatgtct acaaggcgct ctcgacggc aacgtcacct 550
 tgacggcgag taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactcgga tggagtaaca ggcccagggt tcacgtctcg 650
 tggctcctgt tgcacggggg ccgctgtaa ctctgacctc cgcaacaaga 700
 cctacttctc cctcgaatc ccaccccttg tccggctgcc cctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800
 agtgagaccc acatccacca ccaaacccat gccagcgcca accagtcaga 850
 ctccgagaca gggagtagaa cagaggcgct ccggggatga ggagcccagg 900
 ttgactggag gcgcgctgg ccaccaggac cgcagcaatt cagggcagta 950
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 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050
 ctgtgagctt ctccacctgg aaatttccct ctcacctact tctctggccc 1100
 tgggtacccc tcttctcacc acttcctgtt cccaccactg gactgggctg 1150
 gccacgcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc ggccttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgc 1300
 tctccgcttg tctccttgtg atgttaggac agagttagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
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 ctctaagcac tgctccctc actcccgca tcttgggga atcggttccc 1500
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5					10				15
Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala	
			20						25				30	
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser

	35		40		45
Pro Asn Lys Met	Lys Thr Val Lys Cys Ala	Pro Gly Val Asp Val			
	50	55	60		
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	Ile His Gly Gln Phe			
	65	70	75		
Ser Leu Ala Val	Arg Gly Cys Gly Ser Gly	Leu Pro Gly Lys Asn			
	80	85	90		
Asp Arg Gly Leu	Asp Leu His Gly Leu Leu	Ala Phe Ile Gln Leu			
	95	100	105		
Gln Gln Cys Ala	Gln Asp Arg Cys Asn Ala	Lys Leu Asn Leu Thr			
	110	115	120		
Ser Arg Ala Leu	Asp Pro Ala Gly Asn Glu	Ser Ala Tyr Pro Pro			
	125	130	135		
Asn Gly Val Glu	Cys Tyr Ser Cys Val Gly	Leu Ser Arg Glu Ala			
	140	145	150		
Cys Gln Gly Thr	Ser Pro Pro Val Val Ser	Cys Tyr Asn Ala Ser			
	155	160	165		
Asp His Val Tyr	Lys Gly Cys Phe Asp Gly	Asn Val Thr Leu Thr			
	170	175	180		
Ala Ala Asn Val	Thr Val Ser Leu Pro Val	Arg Gly Cys Val Gln			
	185	190	195		
Asp Glu Phe Cys	Thr Arg Asp Gly Val Thr	Gly Pro Gly Phe Thr			
	200	205	210		
Leu Ser Gly Ser	Cys Cys Gln Gly Ser Arg	Cys Asn Ser Asp Leu			
	215	220	225		
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg Ile	Pro Pro Leu Val Arg			
	230	235	240		
Leu Pro Pro Pro	Glu Pro Thr Thr Val Ala	Ser Thr Thr Ser Val			
	245	250	255		
Thr Thr Ser Thr	Ser Ala Pro Val Arg Pro	Thr Ser Thr Thr Lys			
	260	265	270		
Pro Met Pro Ala	Pro Thr Ser Gln Thr Pro	Arg Gln Gly Val Glu			
	275	280	285		
His Glu Ala Ser	Arg Asp Glu Glu Pro Arg	Leu Thr Gly Gly Ala			
	290	295	300		
Ala Gly His Gln	Asp Arg Ser Asn Ser Gly	Gln Tyr Pro Ala Lys			
	305	310	315		
Gly Gly Pro Gln	Gln Pro His Asn Lys Gly	Cys Val Ala Pro Thr			
	320	325	330		
Ala Gly Leu Ala	Ala Leu Leu Leu Ala Val	Ala Ala Gly Val Leu			
	335	340	345		

Leu

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
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 acgccatgga gttggtgctg gtcttcctct gcagcctgct gggcccccag 100
 gtctctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200
 tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
 aatcagaagc ccggggcccc aggagatgag gaagcccagg tggagaacct 300
 catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcagggtg aagcctctgg aacctgaggc ggctgcttga accttggat 400
 gcaaatgtcg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc ccttaaacac 500
 cattctccca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaaactgt gtctttgttg ctacttgttt gtggatggta 650
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 cacatggcca tctgctctc cctgcccccg tggccctcca tcaccttctg 750
 ctctaggagc gctgcttgtt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtggt tcttcagtcg tcttgggacc 850
 tgggaaggtt tgcagcactt tgtcatcatt cttcatggac tcctttcact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtetgaagg 950
 tctcttagca actggagata caaagcaagg agctgggtgag ccagcgcttg 1000
 acgtcaggca ggctatgccc ttccgtgggt aatttcttcc caggggcttc 1050
 cacgaggagt ccccatctgc cccgcccctt cacagagcgc cgggggatcc 1100
 caggcccagg gcttctactc tgccccctgg gaatgtgtcc cctgcatatc 1150
 ttctcagcaa taactccatg ggctctggga ccctaccctt tccaaccttc 1200
 cctgcttctg agacttcaat ctacagcccc gctcatccag atgcagacta 1250
 cagtcctctg aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctt tagatgggca gcagaggcaa ctcccgcac 1400

ctttgtcttg cctgtcgggtg gtcagagcgg tgagcgaggt ggggtggaga 1450
 ctcagcaggc tccgtgcagc ccttgggaac agtgagaggt tgaaggtcat 1500
 aacgagagtg ggaactcaac ccagatcccc cccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaaccaaac cgtgcgctgt gaccattgtg tgttctctgt 1600
 atcgtgatct atctcaaca acaacagaaa aaaggaataa aatatcctt 1650
 gtttcct 1657

<210> 199

<211> 120

<212> PRT

<213> Homo sapiens

<400> 199

Met	Glu	Leu	Val	Leu	Val	Phe	Leu	Cys	Ser	Leu	Leu	Ala	Pro	Met
1				5					10					15
Val	Leu	Ala	Ser	Ala	Ala	Glu	Lys	Glu	Lys	Glu	Met	Asp	Pro	Phe
				20					25					30
His	Tyr	Asp	Tyr	Gln	Thr	Leu	Arg	Ile	Gly	Gly	Leu	Val	Phe	Ala
				35					40					45
Val	Val	Leu	Phe	Ser	Val	Gly	Ile	Leu	Leu	Ile	Leu	Ser	Arg	Arg
				50					55					60
Cys	Lys	Cys	Ser	Phe	Asn	Gln	Lys	Pro	Arg	Ala	Pro	Gly	Asp	Glu
				65					70					75
Glu	Ala	Gln	Val	Glu	Asn	Leu	Ile	Thr	Ala	Asn	Ala	Thr	Glu	Pro
				80					85					90
Gln	Lys	Gln	Arg	Thr	Glu	Val	Gln	Pro	Ser	Gly	Gly	Ser	Leu	Trp
				95					100					105
Asn	Leu	Arg	Arg	Leu	Leu	Glu	Pro	Leu	Asp	Ala	Asn	Val	Asp	Ala
				110					115					120

<210> 200

<211> 415

<212> DNA

<213> Homo sapiens

<400> 200

aaacttgacg ccatgaagat cccggtcctt cctgcggtgg tgcctctctc 50
 cctcctgggtg ctccactctg cccaggagc caccctgggt ggtcctgagg 100
 aagaaagcac cattgagaat tatgcgtcac gaccggagc ctttaacacc 150
 ccgttctcga acatogacaa attgcgatct gcgtttaagg ctgatgagtt 200
 cctgaactgg cagccctctt ttgagtctat caaaaggaaa cttcctttcc 250
 tcaactggga tgcttttctt aagctgaaag gactgaggag cgcaactcct 300
 gatgccagat gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattctcaa cctaccataa ctcttttctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gcctttgcct cagtgattct cacctgcctc tccctctctg 100

cagcaggagt ctcccagggt gttctctctc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200

atgagagtgt ttttgtgtaa agtatatttt agaatactgt tgactttctc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300

tcaacctca aatttttgtt atactagatg gcttccattt acccaccact 350

attttaaggt ccttttattt ttaggttcaa ggttcatttg aottgagaaa 400

gtgcccttct gcagcttcat tgattttgtt tatcttcaact attaatgtga 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtatgt atcccacaaa tgtgattgtt 550

aatttaaatg ttatttctaat attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
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 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300
 actaagaaca gactgtaccg gaaaaatgac tgcattgtcc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttgaagt gatcgggcgt ctccctgaca 400
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 gagcctgccca tcccagtcct ctcttcagtc aagacatcag agtaccatga 500
 tatcatgtat cctgcttga cattttggga agggggacct gctgtttggc 550
 caatttatcc tacaggtcct ggacggtggg acctcttcag agaagatctg 600
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 tttccgagga tcaaggacaa gtccagaacg agatcctctc atttctctgt 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaagatac cttaggaag ccagctgcta aggatgtcca 800
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 ctgcaagttt ccggtttaaa cactctctcc tgtgtggctc actgttttcc 900
 catgttggtg atgagtggtc agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atcccagtc aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttcgac atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgatg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200
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 tatctgctat caagcoaat acotgggttt cottatcatg ctgcaccag 1350
 agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
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 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccccttgtcc cattatttgg agcagaaaaat tcgtcatttg 1600
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 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcagggtccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met	Glu	Trp	Trp	Ala	Ser	Ser	Pro	Leu	Arg	Leu	Trp	Leu	Leu	Leu
1				5					10					15
Phe	Leu	Leu	Pro	Ser	Ala	Gln	Gly	Arg	Gln	Lys	Glu	Ser	Gly	Ser
			20						25					30
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn
			35						40					45
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val
			50						55					60
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys
			65						70					75
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln
			80						85					90
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390

Glu Leu

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
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 tttacctccc ttcggccact tcttgagggg atcccgaggt ctggtggtcc 150
 ggatgccccg cagggatggc tggctgcctc gcaggaccgc agcatccttg 200
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccttg gccttgacgc 350
 tggtagtgcc gtactgggag cccataccga aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc caccctgggtg ccgctcctct gctttgtgct 450
 ccatgtcatc tcttggtccc tcatctttag catccttctc gtctttgact 500
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 ccagctacaa agaaaactcc acctgctctc tcggcccccag gatggggagg 800
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 caagggtcac ttctcaccag caaggaaagag tgggggatgg aagtcatctg 1050
 tcccttcaat gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
 aaggaaagga tctgccctga ccactccctc ggcaactgta cttgcctctg 1150
 cgcctcaggg gtccctctct gcaccgctgg ctcccaactc aagaagggtg 1200
 accagggtct gcaagttcaa cggtcatagc tgtccctcca ggcaccaacc 1250
 ttgctccacc actcccgccc ctagtctctg caectctta ggcctgctc 1300
 ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350
 atgacttggg gctccctgct ctcccaggga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
1				5					10					15
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
			35						40					45
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Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
			65						70				75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
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Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
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Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
			110						115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
			125						130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
			140						145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
			155						160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
			170						175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
			185						190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
			200						205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
			215						220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
			230						235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
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<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

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<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

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Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu	35	40	45	
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg	50	55	60	
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His	65	70	75	
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp	80	85	90	
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys	95	100	105	
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln	110	115	120	
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp	125	130	135	
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp	140	145	150	
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp	155	160	165	

Val Thr Glu Phe	Cys Pro Asn Ala Lys	Tyr Val Met Lys Thr	Asp
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Thr Asp Val Phe	Ile Asn Thr Gly Asn	Leu Val Lys Tyr Leu	Leu
	185	190	195
Asn Leu Asn His	Ser Glu Lys Phe Phe	Thr Gly Tyr Pro Leu	Ile
	200	205	210
Asp Asn Tyr Ser	Tyr Arg Gly Phe Tyr	Gln Lys Thr His Ile	Ser
	215	220	225
Tyr Gln Glu Tyr	Pro Phe Lys Val Phe	Pro Pro Tyr Cys Ser	Gly
	230	235	240
Leu Gly Tyr Ile	Met Ser Arg Asp Leu	Val Pro Arg Ile Tyr	Glu
	245	250	255
Met Met Gly His	Val Lys Pro Ile Lys	Phe Glu Asp Val Tyr	Val
	260	265	270
Gly Ile Cys Leu	Asn Leu Leu Lys Val	Asn Ile His Ile Pro	Glu
	275	280	285
Asp Thr Asn Leu	Phe Phe Leu Tyr Arg	Ile His Leu Asp Val	Cys
	290	295	300
Gln Leu Arg Arg	Val Ile Ala Ala His	Gly Phe Ser Ser Lys	Glu
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Ile Ile Thr Phe	Trp Gln Val Met Leu	Arg Asn Thr Thr Cys	His
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Tyr

<210> 210

<211> 745

<212> DNA

<213> Homo sapiens

<400> 210

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<210> 211

<211> 185

<212> PRT

<213> Homo sapiens

<400> 211

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Ala	Pro	Ala	Leu	Ala	Asn	Tyr	Asn	Ile	Asn	Val	Asn	Asp	Asp	Asn
				20					25					30
Asn	Asn	Ala	Gly	Ser	Gly	Gln	Gln	Ser	Val	Ser	Val	Asn	Asn	Glu
				35					40					45
His	Asn	Val	Ala	Asn	Val	Asp	Asn	Asn	Asn	Gly	Trp	Asp	Ser	Trp
				50					55					60
Asn	Ser	Ile	Trp	Asp	Tyr	Gly	Asn	Gly	Phe	Ala	Ala	Thr	Arg	Leu
				65					70					75
Phe	Gln	Lys	Lys	Thr	Cys	Ile	Val	His	Lys	Met	Asn	Lys	Glu	Val
				80					85					90
Met	Pro	Ser	Ile	Gln	Ser	Leu	Asp	Ala	Leu	Val	Lys	Glu	Lys	Lys
				95					100					105
Leu	Gln	Gly	Lys	Gly	Pro	Gly	Gly	Pro	Pro	Pro	Lys	Gly	Leu	Met
				110					115					120
Tyr	Ser	Val	Asn	Pro	Asn	Lys	Val	Asp	Asp	Leu	Ser	Lys	Phe	Gly
				125					130					135
Lys	Asn	Ile	Ala	Asn	Met	Cys	Arg	Gly	Ile	Pro	Thr	Tyr	Met	Ala
				140					145					150
Glu	Glu	Met	Gln	Glu	Ala	Ser	Leu	Phe	Phe	Tyr	Ser	Gly	Thr	Cys
				155					160					165
Tyr	Thr	Thr	Ser	Val	Leu	Trp	Ile	Val	Asp	Ile	Ser	Phe	Cys	Gly
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Asp	Thr	Val	Glu	Asn										
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<210> 212

<211> 1706

<212> DNA

<213> Homo sapiens

<400> 212

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<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

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				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

	290		295		300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg			
	305		310		315
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr			
	320		325		330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val			
	335		340		345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile			
	350		355		360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser			
	365		370		375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu			
	380		385		390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala			
	395		400		405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile			
	410		415		420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala			
	425		430		435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val			
	440		445		450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala			
	455		460		465
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser			
	470		475		

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
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 gctcaactgcc accctcatgc acaggctggc gccacaactgc tcttcgcgc 100
 gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgtnttga 150
 ggaggagctt cgggcccctgg cggggaagcc gaggcccaga ggcaggaaaag 200
 agcgggtggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgccct 300
 ggtcctgcgc ttcttctctg agtaccagtg gtttggggac tttgctgtgt 350

actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaagg agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550
ctgctggcca tgctggtgca agcg 574

<210> 218

<211> 2571

<212> DNA

<213> Homo sapiens

<400> 218

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ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctggtttg ggccttgta gctgacagaa ggtggcgagg gagaatgcag 200
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggtc 250
cagtctgctc aactacattg acaatgtggg caacctgcac ttctgtatt 300
cagaactctg taaagggtgc tccactacg gcctgaccaa agataggaag 350
aggcgctcac aagatggctg tccagacggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaattgacg 450
acgagcctgg cctagacaac cctgcctacg tgtcctcgcc agaggacggg 500
cagccagcaa tcagccaggt ggaactctggc cggagcaacc gaaatagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgcccctga 700
agtctttcca aggttgtaac acctgattcc agatggtgaa attaccagca 750
toaagatcaa tcgagtagat cccagtgaaa gcctctctat taggctgggtg 800
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tgatgggggt atcgccagag acggccgggt actgccagga gacatcatc 900
taaaggtaaa cgggatggac atcagcaatg tccctcaca ctacgctgtg 950
cgtctctcgg gcagccctg ccagggtgctg tggctgactg tgatgcgtga 1000
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cccagatga cagctttcat gtgattctca acaaaagtag ccccgaggag 1100
cagcttgaaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150
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 cgtcgtgtcc cggcagggtc ggcagcggag ccctgacatc ttccaggaag 1350
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 aacactccca agcccctcca tctacaatt actgtcatg agaaggtggt 1450
 aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtgcaggggg 1500
 gagcatcaca tagagaatgg gatttgccta totatgtcat cagtgttgag 1550
 cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
 gttgaatgtg gatggggtcg aactgacaga ggtcagccgg agtgaggcag 1650
 tggcattatt gaaaagaaca tcatcctcga tagtactcaa agctttggaa 1700
 gtcaaagagt atgagcccca ggaagactgc agcagccag cagccctgga 1750
 ctccaaccac aacatggccc caccagtgta ctgggtccca tctgggtca 1800
 tgtggtcgga attaccacgg tgcttgata actgtaaga tattgtatta 1850
 cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900
 agaatacaat ggaaacaaac ctttttctat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000
 gtcaatggtg gaagtacatc aggaatgata catgcttgct tggcaagact 2050
 gctgaaagaa cttaagga gaattactct aactattgtt tcttgccgtg 2100
 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150
 aaataggcta agaagttgaa acactatatt tatcttgta gttttatat 2200
 ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250
 tgaaagccag ttacacctca gaaaatga ttccaaaaa attaaaaacta 2300
 ctagtttttt ttcagtgtgg aggattctc attactctac aacattgttt 2350
 atattttttt tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aatttaaat ttggtatatg 2450
 ctgaagtctg ccaagggtag attatggcca tttttaatt acagctaaaa 2500
 tatttttttaaatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

1	5	10	15
Asn Tyr Ile Asp	Asn Val Gly Asn Leu	His Phe Leu Tyr Ser	Glu
	20	25	30
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Thr Ile Ser	
	65	70	75
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val Ser	
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro
	155	160	165
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys
	170	175	180
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly
	215	220	225
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro
	230	235	240
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu
	245	250	255
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His
	275	280	285
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys
	290	295	300
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

320	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser
335	340	345
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val
350	355	360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile
365	370	375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly
380	385	390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile
395	400	405
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu
410	415	420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp
425	430	435
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile
440	445	450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val
455	460	465
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala
470	475	480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu
485	490	495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala
500	505	510
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro
515	520	525
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys
530	535	540
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe
545	550	555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe
560	565	570
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly
575	580	585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser
590	595	600
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu
605	610	615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr
620	625	630
Phe Leu		

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatottcaa gcccatataa 50
 aggagataaag ctgcacaggg cagctttact tactccagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gateatgctc ttctaccaca atttttgact ataacatgg ctacattgca 300
 tccagggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaacctt 450
 ctggagtctc tgatcaaaga cgtggattgg ttcctgcttg ggtaacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcgggtgct ggaggctgtg caaaggctgg gctcctgggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctctgttttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgcccacac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
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 accccacgag gcatggggct ccttgggctg ttctgcttgg ccgtgctggc 100
 tgcccagcagc ttctccaagg cactgggagga agaaattacc cctgtggtct 150
 ccattgccta caaagtctg gaagttttcc ccaaggccg ctgggtgctc 200
 ataacctgct gtgcaccca gccaccacg cccatcacct attcctctg 250
 tggaaaccaag aacatcaagg tggccaagaa ggtggtgaag acccacgagc 300
 cggcctcctt caacctcaac gtcacactca agtcagctc agacctgctc 350
 acctacttct gccgggcgtc ctccacctca ggtgccatg tggacagtgc 400
 caggctacag atgcactggg agctgtggtc caagccagt tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
 atctgccagg cgtctctggg cagcccacct atcaccacaa cctgatcgg 550
 gaaggatggg cagggtccac tgacagcag accatgccac aggcagcctg 600
 ccaacttctc ctctctgccg agccagacat cggactggtt ctggtgccag 650
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 aggtggtgac cagaagatgg aggactggca ggggtcccctg gagagcccc 750
 tccttgccct gccgctctac aggagcacc gccgtctgag tgaagaggag 800
 tttggggggt tcaggatagg gaatggggg gtcagaggac gcaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactggt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met
260 265

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
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ctctcttttg tatgacatca ccgtcatccc taagttcaga cctggaccac 150
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttactat 200
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
aaatgtcaca acggcctgga aagcacagaa ccagtgactg agagagggtg 300
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
cccaaggaac ccctcacctc gcaggcaagg atgtcttctg agcagaaagc 400
tgaaggacac agcagtggtt ctggcagtt cagtttcgat gggcagatct 450
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcactctgga 500
gccagaaaaa tgaagaaaaa gtgggagaat gacaagggtt tggccatgtc 550
cttccattac ttctcaatgg gagactgtat aggatggctt gaggactttc 600
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atgtctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700
ttgtgcctc ctcacatcc tccctgctt catcctcctt ggcatctgag 750
gagagtcctt tagagtgaca ggttaagct gataccaaaa ggctcctgtg 800
agcacggtct tgatcaact cgcctttctg tctggccagc tgccccagc 850
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgoc ttgattcctt ttgccaacaa ttttaccagc 950
agttatacct aacatattat gcaattttct ctgtgtgcta cctgatggaa 1000
ttcctgcact taaagttctg gctgactaaa caagatatat cattttcttt 1050
cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100
tcttgcaaat gatattgtca gtaaaaaaat caggttagac ttcagacctc 1150
tggggattct ttcogtgtcc tgaagagaa tttttaaatt atttaataag 1200
aaaaaaaaa tattaatgat tgtttccttt agtaatttat tgtttctgtac 1250
tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
1 5 10 15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20 25 30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35 40 45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50 55 60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65 70 75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80 85 90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95 100 105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110 115 120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125 130 135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140 145 150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155 160 165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170 175 180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185 190 195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200 205 210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230 235 240
Phe Ile Leu Pro Gly Ile
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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tgctgctagc tgccctgggc ctacacaattt toattctgtt ttctgacttt 100
caagtatat accgtggaat ggagttgata ccaaccataa catcggtggag 150

ggttttaatt ttggtggtag cctcaccoca attctggtgt ggcttttctt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttgat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcagggtg 350
 atggcaaaaa tggtattctac atcaacggag gctatgaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgctt 650
 accaatgaga gaaaaaaatg catttctgt atcatcctt tcaataaact 700
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

Met	Glu	Leu	Ile	Pro	Thr	Ile	Thr	Ser	Trp	Arg	Val	Leu	Ile	Leu
1				5					10					15
Val	Val	Ala	Leu	Thr	Gln	Phe	Trp	Cys	Gly	Phe	Leu	Cys	Arg	Gly
				20					25					30
Phe	His	Leu	Gln	Asn	His	Glu	Leu	Trp	Leu	Leu	Ile	Lys	Arg	Glu
				35					40					45
Phe	Gly	Phe	Tyr	Ser	Lys	Ser	Gln	Tyr	Arg	Thr	Trp	Gln	Lys	Lys
				50					55					60
Leu	Ala	Glu	Asp	Ser	Thr	Trp	Pro	Pro	Ile	Asn	Arg	Thr	Asp	Tyr
				65					70					75
Ser	Gly	Asp	Gly	Lys	Asn	Gly	Phe	Tyr	Ile	Asn	Gly	Gly	Tyr	Glu
				80					85					90
Ser	His	Glu	Gln	Ile	Pro	Lys	Arg	Lys	Leu	Lys	Leu	Gly	Gly	Gln
				95					100					105
Pro	Thr	Glu	Gln	His	Phe	Trp	Ala	Arg	Leu					
				110					115					

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

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 cacacatga agctcttctg gcaggtaact gtgcaccacc acacctggaa 100

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 gtgcagccat cgctgctgcc gctcagccg ggcacagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgcggggg 250
 cctctccgag gtcccgagg gtattccctc gaacaccccg tacctcaacc 300
 tcattggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc gcagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacacctg gagctgttcg 450
 acaactggct gacagtcac cctagcgggg ccttgaata cctgtccaag 500
 ctgcggggag tctggcttcg caacaacccc atcgaaagca tcccctcta 550
 cgcttcaac cgggtgccct cctcatgag cctggacttg ggggagctca 600
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 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
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 cacaaccttt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
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 ccatgcacat gcgaggccgc tacctcgttg aggtggacca ggcctccttc 1100
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 caggaaactc aaatatgact cccctcccc aaaaaactta taaatgcaa 2050
 tagaatgcac acaaaagacag caactttgt acagagtggg gagagacttt 2100
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<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn	1	5	10	15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30	35
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	40	45	50	55
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	60	65	70	75
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	80	85	90	95
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	100	105	110	115
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	Leu	Glu	Val	Leu	Gln	Gln	120	125	130	135
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	140	145	150	155
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu	160	165	170	175
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	180	185	190	195
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	200	205	210	215
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	220	225	230	235
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu	240	245	250	255

185					190					195						
Phe	Asn	Leu	Lys	200	Tyr	Leu	Asn	Leu	Gly	Met	Cys	Asn	Ile	Lys	Asp	210
Met	Pro	Asn	Leu	215	Thr	Pro	Leu	Val	Gly	Leu	Glu	Glu	Leu	Glu	Met	225
Ser	Gly	Asn	His	230	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	240
Leu	Ser	Ser	Leu	245	Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	255
Leu	Ile	Glu	Arg	260	Asn	Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	270
Leu	Asn	Leu	Ala	275	His	Asn	Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu	285
Phe	Thr	Pro	Leu	290	Arg	Tyr	Leu	Val	Glu	Leu	His	Leu	His	His	Asn	300
Pro	Trp	Asn	Cys	305	Asp	Cys	Asp	Ile	Leu	Trp	Leu	Ala	Trp	Trp	Leu	315
Arg	Glu	Tyr	Ile	320	Pro	Thr	Asn	Ser	Thr	Cys	Cys	Gly	Arg	Cys	His	330
Ala	Pro	Met	His	335	Met	Arg	Gly	Arg	Tyr	Leu	Val	Glu	Val	Asp	Gln	345
Ala	Ser	Phe	Gln	350	Cys	Ser	Ala	Pro	Phe	Ile	Met	Asp	Ala	Pro	Arg	360
Asp	Leu	Asn	Ile	365	Ser	Glu	Gly	Arg	Met	Ala	Glu	Leu	Lys	Cys	Arg	375
Thr	Pro	Pro	Met	380	Ser	Ser	Val	Lys	Trp	Leu	Leu	Pro	Asn	Gly	Thr	390
Val	Leu	Ser	His	395	Ala	Ser	Arg	His	Pro	Arg	Ile	Ser	Val	Leu	Asn	405
Asp	Gly	Thr	Leu	410	Asn	Phe	Ser	His	Val	Leu	Leu	Ser	Asp	Thr	Gly	420
Val	Tyr	Thr	Cys	425	Met	Val	Thr	Asn	Val	Ala	Gly	Asn	Ser	Asn	Ala	435
Ser	Ala	Tyr	Leu	440	Asn	Val	Ser	Thr	Ala	Glu	Leu	Asn	Thr	Ser	Asn	450
Tyr	Ser	Phe	Phe	455	Thr	Thr	Val	Thr	Val	Glu	Thr	Thr	Glu	Ile	Ser	465
Pro	Glu	Asp	Thr	470	Thr	Arg	Lys	Tyr	Lys	Pro	Val	Pro	Thr	Thr	Ser	480
Thr	Gly	Tyr	Gln	485	Pro	Ala	Tyr	Thr	Thr	Ser	Thr	Thr	Val	Leu	Ile	495
Gln	Thr	Thr	Arg		Val	Pro	Lys	Gln	Val	Ala	Val	Pro	Ala	Thr	Asp	

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr		
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala		
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln		
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln		
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala		
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr		
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly		
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr		
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys		
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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 tacacagtca ttaatgaagc ctgccttgga gcagagtgga atatcatgtg 150
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaga 200
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<210> 231
 <211> 720
 <212> PRT
 <213> Homo sapiens

<400> 231
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 Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
 20 25 30
 Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
 35 40 45
 Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
 50 55 60
 Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
 65 70 75
 Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
 80 85 90
 Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
 95 100 105
 Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
 110 115 120
 Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
 125 130 135
 Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
 140 145 150
 Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
 155 160 165

Phe Val Met Leu	Ser Leu Glu Phe Asp	Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val	Arg Asp Gly Asp Asn	Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys	Gly Asn Glu Arg Pro	Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu	His Val Leu Phe His	Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe	His Ala Ile Tyr Glu	Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys	Phe His Asp Gly Thr	Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys	Cys Ala Cys Leu Ala	Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu	Leu Glu Glu Arg Asn	Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly	Tyr Gln Lys Ile Thr	Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His	Ala Lys Ile Gly Thr	Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr	Val Leu Ser Gly Asn	Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu	Trp Ser Gly Lys Gln	Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro	Lys Ile Ser Asp Leu	Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val	Gln Ser Arg Glu Thr	Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe	Ser Lys Gln Lys Leu	Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu	Pro Phe Gly Asp Leu	Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln	Leu Gln Tyr Glu Cys	Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser	Ser Arg Arg Thr Cys	Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala	Pro Ser Cys Ile Pro	Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala	Pro Lys Thr Gln Gly	Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr	Arg Arg Thr Ser Gly	Val His Asp Gly Ser Leu	470	475	480

His Lys Gly Ala	Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn	485	490	495
Glu Arg Thr Val	Val Val Ala Ala His Cys Val Thr Asp Leu Gly	500	505	510
Lys Val Thr Met	Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly	515	520	525
Lys Phe Tyr Arg	Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser	530	535	540
Leu Gln Ile Ser	Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile	545	550	555
Leu Leu Asp Ala	Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala	560	565	570
Arg Ile Ser Thr	Arg Val Gln Pro Ile Cys Leu Ala Ala Ser Arg	575	580	585
Asp Leu Ser Thr	Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly	590	595	600
Trp Asn Val Leu	Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp	605	610	615
Thr Leu Arg Ser	Gly Val Val Ser Val Val Asp Ser Leu Leu Cys	620	625	630
Glu Glu Gln His	Glu Asp His Gly Ile Pro Val Ser Val Thr Asp	635	640	645
Asn Met Phe Cys	Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile	650	655	660
Cys Thr Ala Glu	Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly	665	670	675
Arg Ala Ser Pro	Glu Pro Arg Trp His Leu Met Gly Leu Val Ser	680	685	690
Trp Ser Tyr Asp	Lys Thr Cys Ser His Arg Leu Ser Thr Ala Phe	695	700	705
Thr Lys Val Leu	Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
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<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
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caaattccga ttactgttgc tgttgacttt tgctctgaca gtggttgggt 200
gggcccaccg taactacttc gtgggtggcca ttcaagagat tctaaagca 250
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tgctgaagt gggtaaatat acaatgggtc tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgttg 1100
 aacacaatcc tttatatatc aacatcacag tggattttctg gtttggtgca 1150
 tgaccctgga tcttttggtg atgttttgaa gaactgattc tttgtttgca 1200
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 cagtgtgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
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 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1 5 10 15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
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gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgctc cgggccccgc aatggccag gcagtgtggt cgcgcctcgg 150
ccgcacatcc tggcttgct gcctcctgcc ctgggccccg gcagggtggt 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgcccacaag 250
ggagcgggtg tgaccatcc gccagcctg gtggccaagg acaaggcgag 300
cctggccctg ccogctgacg cccacctcta ccgcttcac tggatccaca 350
cccgcgtggt gcttactggc aagatggaga aggtctcag ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggtatg gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagtctctc gtggggggacc ttgttgtcac ccagaacact 550

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 cttctctctc cagcaccgga gcaacttctc caagaccgcc ttgtttctct 650
 acagctggga cttcggggac gggaccaga tgggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggga tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggacttctcc gcctcgctga agctgcagga aacctttcga 850
 ggcacccaag tgttggggcc caccctaatt cagaccttcc aaaagatgac 900
 cgtgaccttg aacttctcgg ggagccctcc tctgactgtg tgcctggcgc 950
 tcaagcctga gtgcctcccg ctggagggaag gggagtgeca ccctgtgtcc 1000
 gtggccagca cagcgtacaa cctgacccac accttcaggg acctggggga 1050
 ctactgtctc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccagggtgtg ccctccagaa tccagccggc tgtctttgtc 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gacctgcggg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
 caccctctgg ggtcagggtg tgcctgccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaaac ttacaccgtg tgagcactcc 1400
 cctcccccac cccatctcag tgtaaactga ctgctgactt ggagtttcca 1450
 gcagggtgtg gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
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 cagccactga cataagcccc actcgggttac caccctcttg accccctacc 1650
 tttgaagagg cttcgtgcag gactttgatg cttgggggtg tccgtgttga 1700
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 gtgccagaga gctagaaaga aggtcataaa ggggttaaaa tccataacta 1850
 aaggtgtgac acatagatgg gcacactcac agagagaagt gtgcactgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcggtt 2000
 gctgggatgc acctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gcctgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100
 gttcttgccc cctttataag gccatccctg tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
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 gcttgcaagt agccagatg gcgccactgc actccagcct gagtgcaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr Asn Tyr Ser	Ile Ile Gly Thr Phe Thr Val Lys Leu Lys Val	200	205	210
Val Ala Glu Trp	Glu Glu Val Glu Pro Asp Ala Thr Arg Ala Val	215	220	225
Lys Gln Lys Thr	Gly Asp Phe Ser Ala Ser Leu Lys Leu Gln Glu	230	235	240
Thr Leu Arg Gly	Ile Gln Val Leu Gly Pro Thr Leu Ile Gln Thr	245	250	255
Phe Gln Lys Met	Thr Val Thr Leu Asn Phe Leu Gly Ser Pro Pro	260	265	270
Leu Thr Val Cys	Trp Arg Leu Lys Pro Glu Cys Leu Pro Leu Glu	275	280	285
Glu Gly Glu Cys	His Pro Val Ser Val Ala Ser Thr Ala Tyr Asn	290	295	300
Leu Thr His Thr	Phe Arg Asp Pro Gly Asp Tyr Cys Phe Ser Ile	305	310	315
Arg Ala Glu Asn	Ile Ile Ser Lys Thr His Gln Tyr His Lys Ile	320	325	330
Gln Val Trp Pro	Ser Arg Ile Gln Pro Ala Val Phe Ala Phe Pro	335	340	345
Cys Ala Thr Leu	Ile Thr Val Met Leu Ala Phe Ile Met Tyr Met	350	355	360
Thr Leu Arg Asn	Ala Thr Gln Gln Lys Asp Met Val Glu Asn Pro	365	370	375
Glu Pro Pro Ser	Gly Val Arg Cys Cys Cys Gln Met Cys Cys Gly	380	385	390
Pro Phe Leu Leu	Glu Thr Pro Ser Glu Tyr Leu Glu Ile Val Arg	395	400	405
Glu Asn His Gly	Leu Leu Pro Pro Leu Tyr Lys Ser Val Lys Thr	410	415	420
Tyr Thr Val				

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gtcacaagacc cagcagtggt acagccagac agacggcacg atggcactga 50
gtcoccagat ctgggcccgt tgcctcctgc tctcctcct cctgcgcagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250
ggctgtctgc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg cccccgtccc ctcccttctt tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgetggcctg gcoctggatct tccaccatgt tctgtttgct gccctttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttccacct 150
ccttctcggt ttcacatag tgccagccat ttttgagtc tctttggta 200
tccgcaaaat ctacatgaaa agtctgttaa aaatctttgc gtgggtacc 250
ttgagaatgg agcaggaggc caaggagaag aaccaccagc tttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcta gaagaagaga 350
tcaagagat tcgtcgaaat ggtagtagta aggctctgga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccgaaag gaatggagac 450
cattatggat gatgaggta caaagagatt ctgacagaa gaactggagt 500
cctggaaact gctgagcaga accaattata acttccagta catcagcctt 550
cggctcacgg tctgtgtggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc ctctgtgtgg 650
tgggcacaa tgtgtggga tacttgccaa atgggaggtt taaggaaattc 700
atgagtaaac atgttcaact aatgtgttac cggatctgcg tgcgagcgct 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800
gcactctgtg ggccaatcat acctaccga tcgatgtgat catcttggcc 850
agcgatggct attatgcat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg ccacacgctc tggtttgagc 950
gctcggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatctct atcttcccag aaggaaacct 1050
catcaataat acatcggtga tgatgttcaa aaagggaagt ttgaaattg 1100
gagccacagt ttacctgtt gctatcaagt atgacctca atttggcgat 1150
gcttcttga acagagcaa atacgggatg gtgacgtacc tgetgcgaat 1200
gatgaccagc tgggcoattg tctgcagctg gtgtacctg cctcccata 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcaggaggg acttgtggac ctgctgtggg atgggggctt 1350

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 cggcctcaac atcgccccc gccttgagc tctgcagaca tgataggaag 1950
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgtgct gatgggggta ctaaaggag gggaagaggc cagggtggcc 2050
 gctgactggg ccattggggg aacgtgtgtt cgtactccag gctaaccctg 2100
 aactcccat gtgatgcgcg cttgtttgaa tgtgtgtctc ggtttcccca 2150
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggctttgg attgttctt gtgagtaaat aaaactggct 2350
 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr Thr Asn Gly	Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu Glu	80	85	90
Glu Ile Lys Glu	Ile Arg Arg Ser Gly	Ser Ser Lys Ala Leu Asp	95	100	105
Asn Thr Pro Glu	Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys Arg	110	115	120
Lys Gly Met Glu	Thr Ile Met Asp Asp	Glu Val Thr Lys Arg Phe	125	130	135
Ser Ala Glu Glu	Leu Glu Ser Trp Asn	Leu Ser Arg Thr Asn	140	145	150
Tyr Asn Phe Gln	Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp Gly	155	160	165
Leu Gly Val Leu	Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg Ile	170	175	180
Ala Leu Ala Phe	Thr Gly Ile Ser Leu	Leu Val Val Gly Thr Thr	185	190	195
Val Val Gly Tyr	Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met Ser	200	205	210
Lys His Val His	Leu Met Cys Tyr Arg	Ile Cys Val Arg Ala Leu	215	220	225
Thr Ala Ile Ile	Thr Tyr His Asp Arg	Glu Asn Arg Pro Arg Asn	230	235	240
Gly Gly Ile Cys	Val Ala Asn His Thr	Ser Pro Ile Asp Val Ile	245	250	255
Ile Leu Ala Ser	Asp Gly Tyr Tyr Ala	Met Val Gly Gln Val His	260	265	270
Gly Gly Leu Met	Gly Val Ile Gln Arg	Ala Met Val Lys Ala Cys	275	280	285
Pro His Val Trp	Phe Glu Arg Ser Glu	Val Lys Asp Arg His Leu	290	295	300
Val Ala Lys Arg	Leu Thr Glu His Val	Gln Asp Lys Ser Lys Leu	305	310	315
Pro Ile Leu Ile	Phe Pro Glu Gly Thr	Cys Ile Asn Asn Thr Ser	320	325	330
Val Met Met Phe	Lys Lys Gly Ser Phe	Glu Ile Gly Ala Thr Val	335	340	345
Tyr Pro Val Ala	Ile Lys Tyr Asp Pro	Gln Phe Gly Asp Ala Phe	350	355	360
Trp Asn Ser Ser	Lys Tyr Gly Met Val	Thr Tyr Leu Leu Arg Met	365	370	375
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro Pro	380	385	390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg
 395 400
 Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu
 410 415
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys
 425 430
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His
 440 445
 Lys Asp Arg Ser Arg Ser
 455

<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

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 gccctcgga gacctggcct ccacacctgg caggcccagg ctgttcccac 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag cccaggagac 300
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 tgggagttga atcaggccgt gcggacgggc ggaggtctcc gggagctcta 450
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 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagttg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtctctg gccctggag agttccagct ctacaggggtt gggccctgaa 800
 agtccaacat tggccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagagga acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttgccct ggggaggcca 950
 cagcagggtc gagggaactc tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaaagt actgaggcag ccacttgatt gaacgggtgt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100
gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu	15
1				5					10						
His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	30
			20						25						
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	45
			35						40						
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	60
			50						55						
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	75
			65						70						
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	90
			80						85						
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	105
			95						100						
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	120
			110						115						
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	135
			125						130						
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	150
			140						145						
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	165
			155						160						
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	180
			170						175						
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	195
			185						190						
Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu	210
			200						205						
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr	225
			215						220						
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro	240
			230						235						

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcat ttcagtggtc gacttccaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggctcagca 100

gcctctggac ccgtgaaaga gctggtcggg tccgttggtg gggccgtgac 150

tttcccoctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacacac ccctcttctg accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatag ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctcagcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atgggggaaga ggatgtgatt tatacctgga aggcctggg gcaagcagcc 550

aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700

ccagattcct ccattgtcct cctgtgtctc ctgttggtgc cctcctgtct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg toggaaact 850

cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgtctcag 1000

atgccagaca caccaaggct atttgcctat gagaatgta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	20 25 30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	35 40 45
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	50 55 60
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	65 70 75
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	80 85 90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	95 100 105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	110 115 120
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr Met	125 130 135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	140 145 150
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	155 160 165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	170 175 180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	185 190 195
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	200 205 210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	215 220 225
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	230 235 240
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	245 250 255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	260 265 270
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	275 280 285
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	290 295 300
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	305 310 315
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctgggtcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcgggt ccggtgggtg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgta ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaaatag gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaaact gaagaagaat gactcagggg 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctcccccag 350
gagtacgtgc tgcattgcta cgagcacctg tcaaaagcta aagtcacat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcattgaaca tggggaagag gatgtgattt atacctggaa ggcctggggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagc aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaaggctgt 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttgggtgc 700
cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tcccactca 950
ctgctcagca tgccagacac accaaggcta ttgcctatg agaattgtat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtcctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataacttct 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt coagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gccctcagtg ttgagtggac acttctcacc aggactccac catcatccct 650
 tctatccat acagcatccc cagtataaat tctgtgatct goattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttctttaa tttctctttg atacacctt 800
 gacaattttt catgaaatta ttctctcttc tgttcaataa atgattacco 850
 ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys	
1			5					10					15	
Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
			20						25					30
Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
			35						40					45
Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
			50						55					60
Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
			65						70					75
Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
			80						85					90
Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
			95						100					105
Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
			110						115					120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
 125 130 135
 Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
 140 145 150
 Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
 155 160 165
 Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
 170 175 180

<210> 257

<211> 766

<212> DNA

<213> Homo sapiens

<400> 257

ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
 tctcaaaaac ccactctctg ctttgagtgg tggttcccg gaattatagg 200
 agcagggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350
 ggctctctta aaaggctctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactggttt 500
 caataaaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccactttcta 600
 gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650
 cagtcagata gtcacgggtt tccttggctg tctgtgtgga gtctctaagc 700
 gaagaagta c aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258

<211> 229

<212> PRT

<213> Homo sapiens

<400> 258

Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35		40		45
Ser Cys Phe Glu	Trp Trp Phe Pro Gly	Ile Ile Gly Ala Gly	Leu		
	50		55		60
Met Ala Ile Pro	Ala Thr Thr Met Ser	Leu Thr Ala Arg Lys	Arg		
	65		70		75
Ala Cys Cys Asn	Asn Arg Thr Gly Met	Phe Leu Ser Ser Phe	Phe		
	80		85		90
Ser Val Ile Thr	Val Ile Gly Ala Leu	Tyr Cys Met Leu Ile	Ser		
	95		100		105
Ile Gln Ala Leu	Leu Lys Gly Pro Leu	Met Cys Asn Ser Pro	Ser		
	110		115		120
Asn Ser Asn Ala	Asn Cys Glu Phe Ser	Leu Lys Asn Ile Ser	Asp		
	125		130		135
Ile His Pro Glu	Ser Phe Asn Leu Gln	Trp Phe Phe Asn Asp	Ser		
	140		145		150
Cys Ala Pro Pro	Thr Gly Phe Asn Lys	Pro Thr Ser Asn Asp	Thr		
	155		160		165
Met Ala Ser Gly	Trp Arg Ala Ser Ser	Phe His Phe Asp Ser	Glu		
	170		175		180
Glu Asn Lys His	Arg Leu Ile His Phe	Ser Val Phe Leu Gly	Leu		
	185		190		195
Leu Leu Val Gly	Ile Leu Glu Val Leu	Phe Gly Leu Ser Gln	Ile		
	200		205		210
Val Ile Gly Phe	Leu Gly Cys Leu Cys	Gly Val Ser Lys Arg	Arg		
	215		220		225
Ser Gln Ile Val					

<210> 259

<211> 434

<212> DNA

<213> Homo sapiens

<400> 259

gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataago 50
caccatgagg ctgtcagtgt gtctctgat ggtctgctg gccctttgct 100
gctaccaggc ccatgctctt gtctgcccag ctgttgcttc tgagatcaca 150
gtctctttat tcttaagtga cgctgcggta aacctccaag ttgccaact 200
taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
ccgatcagat atcttttaag aaacgactct cattgaaaaa gtctcgggtg 300
aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctgttt 350
tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaaggtt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met	Arg	Leu	Ser	Val	Cys	Leu	Leu	Met	Val	Ser	Leu	Ala	Leu	Cys
1				5					10					15

Cys	Tyr	Gln	Ala	His	Ala	Leu	Val	Cys	Pro	Ala	Val	Ala	Ser	Glu
				20					25					30

Ile	Thr	Val	Phe	Leu	Phe	Leu	Ser	Asp	Ala	Ala	Val	Asn	Leu	Gln
				35					40					45

Val	Ala	Lys	Leu	Asn	Pro	Pro	Pro	Glu	Ala	Leu	Ala	Ala	Lys	Leu
				50				55						60

Glu	Val	Lys	His	Cys	Thr	Asp	Gln	Ile	Ser	Phe	Lys	Lys	Arg	Leu
				65					70					75

Ser	Leu	Lys	Lys	Ser	Trp	Trp	Lys
				80			

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgccca gctcagggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctotcccc tgcagccctg ccctcgaac tgtgacattg 200

agagagtgac cctggccctt ctctactgg caggcctgac tgccttgaa 250

gccaatgacc catittgcaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtactga gaaggccatc ccaactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcttgaagcc 500

taaacactggc cccacgaccc tctctccctg ggaggcetta tctcaagga 550

aggacttctc tccaagggca ggtgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccacaccac cctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggttggg gctcctggct actcgccgcg atcctggctt 150

ggacctatgc cttctataac aactgccgcc ggctccagtg ttccccacag 200

ccccaaaac ggaactgggt ttgggggtcac ctgggcctga tcaactctac 250

agaggagggc ttgaaggact cgaccagat gtggccacc tattccagg 300

gctttacggg atggctgggt cccatcatcc cttcatcgt tttatgccac 350

cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400

ggataatctc ttcacaggt tcctgaagcc ctggctggga gaagggatac 450

tgctgagtgg cggtgacaag tggagccgcc accgtggat gctgacgcc 500

gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700

atatattgcc accatcttgg agctcagtcg cctttagtag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgaaggg 800

cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850

catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900

tcaaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcattgt ttggaggcca tgacaccacg gccagtgccc 1050
 tctctcggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgacg ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcactctccc atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atcccaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcaca ccaactgtg tggccgagtc 1350
 ctgaggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctcgcga gggcccagga actgcctgg 1450
 gcaggcggtc gccatggcgg agatgaaagt ggtcctggcg ttgatgtgc 1500
 tgcacttcg gttcctgcc gaccacaact agccccgcag gaagctggaa 1550
 ttgatcatgc gcgcgaggg cggtcttgg ctgcgggtgg agccccgtaa 1600
 tgtaggcttg cagtacttt ctgaccatc cacctgtttt ttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
1				5					10					15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu	
				20				25					30	
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
				35				40						45
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
				50				55						60
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
				65				70						75
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
				80				85						90
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
				95				100						105
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
				110				115						120
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
				125				130						135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	395	400	405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	410	415	420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	425	430	435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	440	445	450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgttttgc tttcacagga ttcttaaadc ctctcttctc 100
tcttcctctc ctgactcca gggaaatadc ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaacc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gctctgaagt aaataagcat ctggttagtca gtcagaaac 450
accocatcta gaatatgaaa aataacacaa tgcttgattt gaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70 75
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttcccaag gaatgtacat cagccccaag gaagctaggc 50
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taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
acctgtctcg aaccagctg aggccatgcc ctcccaggg accgtctgca 200
gcctctctgt cctcgcatg ctctggctgg acttggccat ggcaggctcc 250
agcttctctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaagctgc agccccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtcagg 400
ttcaacgccc cttttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cgcccacaag cttactcac 550
ctctctctaa gtttagaagc gtcacatctg cttttcgctt gcttctcgag 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu
50 55 60
Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg
65 70 75
Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln
80 85 90
Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile
95 100 105
Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys
110 115

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

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gtccagatacc tcgtgaaccc cggggtgctc cgcacggacc ccagatgtca 100
agaatatgaa cacgtggctg ctgttctccc cctgttcccc ggtgcagggtg 150
cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgcgtgactt 200
tcttggtctg gtgcacctgg gccagctgct catcttcac atctacctga 250
gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
gctgtctcat ttacacctct acttgagtat gtcctaacc ctgagcccc 350
cacgcttggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650
aaatatatta caggcagtc acccactaac caaacaactg aagcgagagc 700
tgtgtgtctg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
gttgtctgaa gacggagggt aaactcccca gccccagaa aacctgtgtt 800
ggaagtaaca acaacctccc tgctctggc accagccgtt ttggtcatgg 850
tgggccagct gcaaagctc ttcatctctc tgggcagtgg tggccccag 900
gctgtggcct ctacaggggt ttctgtggac acgggcagca gagtgtgtcc 950
aggccagccc ccaagaatgc cctgctctg acagcttgcc caacccctgg 1000
tcagggcaga gggagttggg tgggtcaggc tctgggtcca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgccag ctcagaatga 1100
 acacacccca ccaagagcct cctgttcat aaccacaggt tacctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatacttt acagtcactg ttgtcttgcc tgagggttga attttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
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Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20				25					30	
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35				40					45	
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50				55					60	
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65				70					75	
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80				85					90	
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95				100					105	
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
				110				115					120	
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
				125				130					135	
Ala	Gly	Val	Val	Pro	Gly	Ala								
				140										

<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

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 accatggcca agatggagct ctogaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc aacacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaagtgccc caagcccctg 200
 tgcgagaaa gtctggcagc caagtgtctt gacatgccag tgcctctgga 250

tgagataacc	aacacatcca	cccaggaggt	ggtacaatac	aactgggaga	300
ctgggggatga	coggtttctc	ttccggagct	tcoggagtg	catgtggcta	350
tctctgtgag	aaactgtgga	agaaccagg	gagaggtgcc	gaagtttcat	400
tgaacttaca	ccaccagcca	agagaggtga	gaaaggacta	ctggaatttg	450
ccacgttgca	aggcccatgt	caccccaact	tcogatttgg	agggaagcgg	500
ttgatggaga	aggcttccct	ccccctccct	cccttggggc	tttgtggcaa	550
aaatcctatg	gttatccctg	ggaacgcaga	tcacctacat	cggacttcaa	600
ttcatcagct	tctctctgct	actaacagac	ttgctaacta	ctgggaaccc	650
tgctgtggg	ctcaactga	gcgcctttgc	tgctgtttcc	tctgtctctg	700
caggtctcct	gggagtggtg	gccacatga	tgtattcaca	agtcttccaa	750
gcgaactgca	acttgggtgc	agaagactgg	agacacatg	tttgaatta	800
tggtctggcc	ttctacatgg	cctggctctc	cttcacctgc	tgcatggcgt	850
cggctgtcac	cacottcaac	acgtacacca	ggatggtgct	ggagttcaag	900
tgcaagcata	gtaagagctt	caaggaaaac	ccgaactgcc	taccacatca	950
ccatcatgtg	ttccctcggc	ggctgtcaag	tgcacgcccc	accgtgggtc	1000
ctttgaccag	ctaccaccag	tatcataatc	agcccatcca	ctctgtctct	1050
gagggagtcg	actctactc	cgagctgcgg	aacaagggat	ttcaagagg	1100
ggccagccag	gagctgaaag	aagcagttag	gtcactctga	gaggaagagc	1150
agtgttagga	gttaagcggg	tttggggagt	aggcttgagc	cctaccttac	1200
acgtctgctg	attatcaaca	tgtgtttaag	ccaacatcgc	tctcttgagc	1250
atggttttta	gaggctacga	ataaggctat	gaataagggt	tatctttaag	1300
tcctaaggga	ttcctgggtg	ccaactgctc	cttttctctc	acagctccat	1350
cttgtttcac	ccacccacca	tctcacacat	ccagaattcc	cttctttact	1400
gatagtttct	gtgccagggt	ctgggctaaa	ccatggagat	aaaaagaaga	1450
gtaaaaataca	cttcccqacc	ttaaqgctct	gaaa	1484	

	35		40		45
Pro Lys Pro Leu	Cys Glu Lys Gly Leu	Ala Ala Lys Cys Phe Asp			
	50	55	60		
Met Pro Val Ser	Leu Asp Gly Asp Thr	Asn Thr Ser Thr Gln Glu			
	65	70	75		
Val Val Gln Tyr	Asn Trp Glu Thr Gly	Asp Asp Arg Phe Ser Phe			
	80	85	90		
Arg Ser Phe Arg	Ser Gly Met Trp Leu	Ser Cys Glu Glu Thr Val			
	95	100	105		
Glu Glu Pro Gly	Glu Arg Cys Arg Ser	Phe Ile Glu Leu Thr Pro			
	110	115	120		
Pro Ala Lys Arg	Gly Glu Lys Gly Leu	Leu Glu Phe Ala Thr Leu			
	125	130	135		
Gln Gly Pro Cys	His Pro Thr Leu Arg	Phe Gly Gly Lys Arg Leu			
	140	145	150		
Met Glu Lys Ala	Ser Leu Pro Ser Pro	Pro Leu Gly Leu Cys Gly			
	155	160	165		
Lys Asn Pro Met	Val Ile Pro Gly Asn	Ala Asp His Leu His Arg			
	170	175	180		
Thr Ser Ile His	Gln Leu Pro Pro Ala	Thr Asn Arg Leu Ala Thr			
	185	190	195		
His Trp Glu Pro	Cys Leu Trp Ala Gln	Thr Glu Arg Leu Cys Cys			
	200	205	210		
Cys Phe Leu Cys	Pro Val Arg Ser Pro	Gly Asp Gly Gly Pro His			
	215	220	225		
Asp Val Phe Thr	Ser Leu Pro Ser Asp	Cys Gln Leu Gly Ser Arg			
	230	235	240		
Arg Leu Glu Thr	Thr Cys Leu Glu Leu	Trp Leu Gly Leu Leu His			
	245	250	255		
Gly Leu Ala Leu	Leu His Leu Leu His	Gly Val Gly Cys His His			
	260	265	270		
Leu Gln His Val	His Gln Asp Gly Ala	Gly Val Gln Val Gln Ala			
	275	280	285		

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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 cttggtctcc tgtctttatg tctttctcct ctctctatcc tgcacatccc 100
 ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggtgac cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccaatt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccctat tctctctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cttacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccaggaga aatggaggag cttgttagcc 500
 acctccctgt cagccagtat taacatgtcc ccttcccctt gcccgccgt 550
 agattcagga cattgcccc tgtgtgccac caaaccagga ctttcccctt 600
 ggcttggcat ccttggctct ctctgggtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcattcttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgctga ataataaagt gggaagggga agcagagggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctggttttta tcggaagat 850
 catctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgtggggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccagct gtattacctg 1050
 ctggaaccaa ggaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccatg ccaccaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu
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Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20					25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50					55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
				65					70					75
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
				80					85					

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
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 gtcgtggagc caggagcgac gtcaccgccca tggcaggcat caaagctttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaataactg gccctctttt gttctatttt 200
 tttacatcct ttcacctatt ccatactgca tagcaagaag attagtgatg 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggact ccctattgta ttgcccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgtctcac aggaacacaca 400
 gtcacttttg caactatact aggccttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
 atgggacttc tgtcatttgt tggccattca cgcacacagg agatggggca 550
 gttaatgctg aatgggtatg caagcctctt gggggtattt tagtgctccc 600
 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tggaaaagct tgactgatatt cacacttacc 700
 tatagtatgc ttttttggtt gtccctgtga atttaaatat ttatgtgttt 750
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 ttttaagtga atcatttgca ttggttagga attcagaatt ccgcggctc 850
 tattactggt caagtacatc tttctcttta aaattattta gcctccatta 900
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacgggtg gcatacgtaa tagactgtat 1000
 actcagtgca aatatagctg catttatacc tcagaggggc caagtgttaa 1050
 tgcccattgc cctcggttaag ggtgtgttgt tttactggta gacagatgtt 1100
 ttgtggattg aaaaattatt tatggaattg ctacagagga gtgcttttct 1150
 tctcaattgt tagaagaatt tatgttaaac tttaaggtaa ggggtgtaaa 1200
 acatttttga gataagggtt ttatttatgt ttattattgt tagagtgtgt 1250
 tgcaatgttg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
 ctatttataa gtgaaatttg tgatctccta tcaacctttc atgtttttac 1350
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 gtttgcacat tatatgccag aaaaccttcc tctgttctct ccttttgact 1450

tatttggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
cattcagagt gcccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
cttgtagtc ttacagataa ttcatgcatt aacagtttaa gatttagacc 1650
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gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtgtgc 1900
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cattcaagtt ggtctgacag tattttgtta aggatatttg tttgtatgtt 2000
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
aatcatgaca gctgtctggt gttttatgaa gtttatttct caagaaaatg 2100
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acttggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
ttgattggc agcatttgtt ctttgacctt gtatactagc ttgacatagt 2550
gctgtctctg atttctagc tagttaactg agatatgaat tttccataga 2600
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tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276
<211> 131
<212> PRT
<213> Homo sapiens

<400> 276
Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala
1 5 10 15
Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr
20 25 30
Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr	Cys Ile Ala Arg Arg	Leu Val Asp Asp Thr Asp			
	50	55			60
Ala Met Ser Asn	Ala Cys Lys Glu Leu	Ala Ile Phe Leu Thr Thr			
	65	70			75
Gly Ile Val Val	Ser Ala Phe Gly Leu	Pro Ile Val Phe Ala Arg			
	80	85			90
Ala His Leu Ile	Glu Trp Gly Ala Cys	Ala Leu Val Leu Thr Gly			
	95	100			105
Asn Thr Val Ile	Phe Ala Thr Ile Leu	Gly Phe Phe Leu Val Phe			
	110	115			120
Gly Ser Asn Asp	Asp Phe Ser Trp Gln	Gln Trp			
	125	130			

<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

cccacgcgtc cccccacgcg tccgcccacg cgtccgccca cgcgtccgcc 50

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cacactgcct ggtggaggga aggagcccg ggcctctcg ccgtccccc 150

cgcgcgcgtc cgcacctccc caccgccgc cgcgcgcgc ccgcccgcg 200

caaagcatga gtgagcccgc tctctgcagc tgcccggggc gcgaatggca 250

ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtgtt cgtttccaat 300

gacggacatt aaccagactg tcagatcctg gggagtcgag agccccgagt 350

ttggagtgtt ttccccccac aacgtcacag tccgaactgc agaggaaaag 400

gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttggaaaact 450

tgcgggtcct agaagtcgcc tccccgcctt gccggccgcc cttgcagccc 500

cgaagcgcgc agcaaagtga gacattgtgc gctgcgaga tccgcggccc 550

gcggaccggg gctgcctcgg aaacacagag ggtcttctc tcgcctgca 600

tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtactct 650

ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700

tctggaagaa ttctcgctaa tggatttctt gctgctcggt ctctgtctat 750

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tgttttcaga tgctgccgc cgcgccgcgc gggtgccccc agctgtgcgc 850

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<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe
				20				25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg
				35				40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu
				50				55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr
				65				70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met
				80				85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val
				95				100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr
				110				115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg
				125				130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu
				140				145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr
				155				160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg
				170				175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr
				185				190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe
				200				205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val
				215				220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys
				230				235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp
				245				250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu
				260				265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser
				275				280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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 ccggcggcgc cgttgagttc ccggcggaaca agatgggtgc agtcctgggt 200
 caagaaggtc acgcccgttc agacatgctc ctgcccgttg atggggaact 250
 cgtcctggct tcaggagccg gattcggcgt ctccagcgtg ggctcgcacc 300
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<210> 281

<211> 229

<212> PRT

<213> Homo sapiens

<400> 281

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Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe
				20					25					30
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly
				35					40					45
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val
				50					55					60
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly
				65					70					75
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val
				80					85					90
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg
				95					100					105
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser
				110					115					120
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val
				125					130					135

Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe
				140					145					150
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser
				155					160					165
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala
				170					175					180
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro
				185					190					195
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly
				200					205					210
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala
				215					220					225

Leu Leu Gln Pro

<210> 282
 <211> 644
 <212> DNA
 <213> Homo sapiens

<400> 282
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 tgtgttttgc acttaccctg tgtctgcct tttggtggca taacaaggga 150
 cttgcactta tcttctgcat ttgcagctct ttggcattga cgtggtacag 200
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 tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
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 cctcatgtac ctgtttcctc tctggtggtt gtccactga attcccatga 550
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
 <211> 77
 <212> PRT
 <213> Homo sapiens

<400> 283
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Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe
35 40 45

Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe
50 55 60

Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys
65 70 75

Leu Ala

<210> 284

<211> 2623

<212> DNA

<213> Homo sapiens

<400> 284

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gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
ccagatagat tatcttacac tgaactgac aagtaacttg aaaatgactt 250
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ggataaaaa aaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Gln Ala	
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
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 tcacacagcc aaaggaggca gagcagaaac tcacaaccag atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250
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 taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
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Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
				20					25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
				35					40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
				50					55					60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Pro	Asp	Val	Ala	
				65					70					75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
				80					85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
				95					100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
				110					115					120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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aagtccattt tcaagctcag tgtcttctac cctcccagc aattctccac 200

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aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggagc 350

cattgacgcg caggagatca tgcagtcctc gcgggacttg ggagtcgaaga 400

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cgtggaaaac atccccgaga tcatctota ctggaagcat tccacgatct 550

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Thr	Glu	Phe	Gln	Tyr	Phe	Glu	Ser	Lys	Gly	Leu	Pro	Ala	Glu	Leu
			20						25					30
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe
			35						40					45
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp
			50						55					60
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr
			65						70					75
Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu
			80						85					90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	
				95					100					105	
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	
				110					115					120	
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	
				125					130					135	
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	
				140					145					150	
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	
				155					160					165	
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	
				170					175					180	
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	
				185					190					195	
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	
				200					205					210	
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	
				215					220					225	
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	
				230					235					240	
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	
				245					250					255	
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	
				260					265					270	
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	
				275					280					285	
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	
				290					295					300	
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	
				305					310					315	
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	
				320					325					330	
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	
				335					340					345	
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	
				350					355					360	
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	
				365					370					375	
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	
				380					385					390	
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	
				395					400					405	

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
410 415 420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu
425 430 435

Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val
440 445 450

Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly
455 460 465

Val Gln Ser Arg

<210> 290

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250

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<210> 291

<211> 282

<212> PRT

<213> Homo sapiens

<400> 291

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Ile	Ser	Gly	Arg	His	Ser	Ile	Thr	Val	Thr	Thr	Val	Ala	Ser	Ala	35	40	45	
Gly	Asn	Ile	Gly	Glu	Asp	Gly	Ile	Leu	Ser	Cys	Thr	Phe	Glu	Pro	50	55	60	
Asp	Ile	Lys	Leu	Ser	Asp	Ile	Val	Ile	Gln	Trp	Leu	Lys	Glu	Gly	65	70	75	
Val	Leu	Gly	Leu	Val	His	Glu	Phe	Lys	Glu	Gly	Lys	Asp	Glu	Leu	80	85	90	
Ser	Glu	Gln	Asp	Glu	Met	Phe	Arg	Gly	Arg	Thr	Ala	Val	Phe	Ala	95	100	105	
Asp	Gln	Val	Ile	Val	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Lys	Asn	Val	110	115	120	
Gln	Leu	Thr	Asp	Ala	Gly	Thr	Tyr	Lys	Cys	Tyr	Ile	Ile	Thr	Ser	125	130	135	
Lys	Gly	Lys	Gly	Asn	Ala	Asn	Ile	Glu	Tyr	Lys	Thr	Gly	Ala	Phe	140	145	150	
Ser	Met	Pro	Glu	Val	Asn	Val	Asp	Tyr	Asn	Ala	Ser	Ser	Glu	Thr				

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185	190	195
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val
200	205	210
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys
215	220	225
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val
230	235	240
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn
245	250	255
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser Trp
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Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys
275	280	

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

Met	Ala	Ala	Ser	Leu	Gly	Gln	Val	Leu	Ala	Leu	Val	Leu	Val	Ala	15
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Ala	Leu	Trp	Gly	Gly	Thr	Gln	Pro	Leu	Leu	Lys	Arg	Ala	Ser	Ala	30
			20						25						
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu	45
			35						40						
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro	60
			50						55						
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu	75
			65						70						
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu	90
			80						85						
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp	105
			95						100						
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln	120
			110						115						
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro	135
			125						130						
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro	150
			140						145						

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcgtt 250
gctgggtatca ctgcagtgtc tgttgacgtc gtagaatctc tgagctgcgt 300
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gccctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
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cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
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acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
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<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala
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Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys
				20					25					30
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn
				35					40					45
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro
				50					55					60
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser
				65					70					75
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu
				80					85					90
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys
				95					100					105
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser
				110					115					120
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser
				125					130					135
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val
				140					145					150
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu
				155					160					165
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe
				170					175					180
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys
				185					190					195
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro
				200					205					210
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu
				215					220					225
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro			
				230					235					

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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aatctgggtc cccggcggc gggggcccaa ggctgaccc agactccgac 200
 cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
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 ggctgccgag ctcttgccg ccacggtgtc caccggcttt agccggtcgt 400
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 gccggaagg atagaccag cagagagctt cccagtgcga ctcccaatac 500
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 agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
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 ccaactagata tttttagtac agaaaaacaa aactggaaaa cacaa 1245

<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

Met	Val	Pro	Ala	Ala	Gly	Ala	Leu	Leu	Trp	Val	Leu	Leu	Leu	Asn
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Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

65					70					75				
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
				95					100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110					115					120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
				125					130					135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140					145					150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
				155					160					165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
				170					175					180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
				185					190					195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
				200					205					210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys
				215					220					225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
				230					235					240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
				245					250					255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260					265					270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275					280					285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290					295					300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
				305					310					315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
				320					325					330
Thr	Glu	Met	Gln	Pro	Ile	Asp	Arg	Asn	Gln	Arg				
				335					340					

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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 actgctcttg gggcgctctg aatcaactcc gctcccggcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

Met	Ala	Gly	Leu	Ala	Ala	Arg	Leu	Val	Leu	Leu	Ala	Gly	Ala	Ala
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Ala	Leu	Ala	Ser	Gly	Ser	Gln	Gly	Asp	Arg	Glu	Pro	Val	Tyr	Arg
			20						25					30
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
			35						40					45
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
				50					55					60
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
				65					70					75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe
 80 85 90
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro
 95 100 105
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val
 110 115 120
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met
 125 130 135
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp
 140 145 150
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu
 155 160 165
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile
 170 175 180
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val
 185 190 195
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His
 200 205 210
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu
 215 220 225
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu
 230 235 240
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys
 245 250 255
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu
 260 265 270
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala
 275 280 285
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser
 290 295 300
 Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp
 305 310 315
 Lys Phe Lys Leu Asp
 320

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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cctcagtcac cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
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 aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg		
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<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

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 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

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				20					25					30
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser
				35					40					45
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr
				50					55					60
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly
				65					70					75
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr
				80					85					90
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser
				95					100					105
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val
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Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile
				125					130					135
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His
				140					145					150
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala
				155					160					165
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp
				170					175					180
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly
				185					190					195
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr
				200					205					210
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly
				215					220					225
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln
				230					235					240
Arg	Ser	Leu	Leu	Cys	Lys	Asp								
				245										

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
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ccttcggnat catcagtggg gnttntctg ttatcaatat ttggctgat 150
gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200
cctganttca gcctttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
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ctgcttaaga aggcagatga ggggttagca tngctgagtg aggcaggaag 150
atcacccatt tccatccgcc agatggccta tgtttntggt ntctcctcg 200
gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
gggccagggtg tggttgggat ccattggagan tcaccctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
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gctgtccac ccacgcgga ctcgccagnt gngcgccct tccattttgc 150
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 cgctgagtgga ggacggaaga tcacccatct ccatccgcc gatggcctat 550
 gtttctggctc tctccttcgg tatcatcagt ggtgtctctc ctgttatcaa 600
 tattttggct gatgcacttg ggcaggtgt ggttgggac catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cnttccccgg ggtctggggg tgacattgca ccgcgccct cgtggggctg 100
 cgttgccacc ccacgcgac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctggtc agggccccc ccccttccc acctgaccag ccatgggggc 200
 tgcgggtgtt ttcgggctgc actttogtc cgttcgggcc cggcctctgc 250
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<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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 ctggtgaggg tggtcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
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<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

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			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
				35					40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
				50					55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
				65					70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
				80					85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
				95					100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
				110					115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
				125					130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
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Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
				155					160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
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Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
				185					190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
				200					205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
				215					220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
				230					235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
				245					250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
				260					265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
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Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
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<210> 311
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
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<210> 312
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
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<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 cagggttgga gccgggtcct cagctgtctg ctcagcagcc ctggacccgc 2700
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 tgggggcctc cgaaagggtt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctcctcgg gcaggagggg agtggtcttc ctccaaagga caccgatgg 2850
 caggtgccca gggggtgtgg ggttcgcttc tcccttcccc tcccaactga 2900
 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggttggt 2950
 gggagaggcc gtgtgacctg gctctctgtc ccagtgcac caggtcaccc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10 15
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu	Ser Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
110	110	115	120
Glu His Gln Ala	Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
125	125	130	135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
140	140	145	150
Ala Ser Glu Leu	Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
155	155	160	165
Gly Thr Leu Gly	Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln	Gly
170	170	175	180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala	His
185	185	190	195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg	Asp
200	200	205	210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg	Ala
215	215	220	225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser	Arg
230	230	235	240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp	Asp
245	245	250	255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe	Gln
260	260	265	270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val	Phe
275	275	280	285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp	Asp
290	290	295	300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp	Leu
305	305	310	315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Thr Gln Ala Ala Tyr	Glu
320	320	325	330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr	Ala
335	335	340	345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Gly Ser Val Asp Pro	Glu
350	350	355	360
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala
365	365	370	375
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys
380	380	385	390
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr
395	395	400	405
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn
410	410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc tttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
 gcagtcagag acttcccctg cccctcgtg ggaaagaaca ttaggaatgc 50
 cttttagtgc cttgcttct gaactagctc acagtagccc ggcggcccag 100
 ggcaatccga ccacatttca ctctcaccgc ttaggaatc cagatgcagg 150
 ccaagtacag cagcagcagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actcggcacc cagagccccg 250
 gcgcacagag cacagggtc cctcttcaac gtggcgacca gtggccctga 300
 cctctgtgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacacat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaaat ggcattggaga caattgtctac cagtctctata 600
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaaaaa 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac tctgagtttt tctactotta ttggacaggg cttttgocgc 750
 ctgacagtggt caaggcctgg ctgtggatgg atggaacccc ttctacttct 800
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tgggtgaagcc agagagcctc 950
 catgtccccc ctgaaacatt aggcgaaggt gactgattcg cctctgcaa 1000
 ctacaaatag cagagtgcgc caggcgggtgc caaagcaagg gctagtgtgag 1050
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100
 aaaatgggtt ctctgttttc ctgttcaggaa tcaccagcat ttctgagctt 1150
 gggtttatgc acgtatttaa cagtacaaag aagtcttatt tacatgccac 1200
 caaccacact cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250
 aacttttagc tctcttctct ctcaatgtct aatacacct cctgttttc 1300
 atgtcttctt tacacttggt ggaataagaa actttttgaa gttagagaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt coatcagaaa 1400
 ttggcagtc cttccagat tgtaccgca aatacacaag gaattctttt 1450
 tgtttgtttc agttcatact agtcccttcc caatccatca gtaaagacc 1500
 catctgcctt gtccatgcgc ttcccaaca gggatgtcac ttgatatgag 1550
 aatctcaaat ctcaatgcct tataagcatt ccttctgtg tocatthaaga 1600
 ctctgataat tgtctccct ccataggaat ttctccagg aaagaaatat 1650
 atccccatct cgtttcata tcagaactac cgtcccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgcgc tctcatctg cacctgtaat 1750
 agtttcagtt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319

<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
ctttttccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgctgtt 200
ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtccaaga gttgaattt nttcaagtcc agaataataa 350
gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcantact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgtgacg acttcctgca agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgcttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccacatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgcgcg tccggggatt cggctcgggc cgctggctct gctctcgagg 100
gagggagcgg gcccgcccg ggggcccgag cctccggat ccgcccctc 150
cccggtcccg cccctcggga gactcctctg gctgctctgg ggttcgccc 200
gggcccggga ccgcgggtcc gggcgccatg cgggcatcgc tgctgctgtc 250
ggtgctgcgg ccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350
ccgcccacac ctggagactc tgagctgccg ccgcgaggca acaccaacgc 400
ggcgcgccgg cccaactcgg tgcagcccg agcggagcgc gagaagccc 450
gggcccggga aggcgcggg gagaattggg agccgcgctg cttgccctac 500
caccctgcac agcccgccca ggcgcgcaaa aaggccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg cgggtgctga 600
cctctcagac cacgctgccc acgctgggcg tggccgtgaa ccgcacgctg 650
gggcaccgcg tggagcgtgt ggtgttcctg acgggcgcac ggggcccgcc 700
ggccccacct ggcatggcag tggtagcgtg gggcgaggag cgacccattg 750
gacacctgca cctggcgctg cgccacctg tggagcagca cggcgacgac 800
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cctggcagcg ctaactggcc acctcagcct ggccctcgcc gccacactgt 900
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cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
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 ctgcgctggg actacttcac ggagcagcac gctttctcct gcgccgatgg 1450
 ctcacccccc tgcccactgc gtggggctga ccgggctgat gtggccgatg 1500
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 cgggtccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
 ccgggggtatg gaatacacgc tggacttgca gctggaggca ctgacccccc 1650
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 gccctgaccc tgctgctact gtatgagcgg cgcaggccc agccgctggc 1900
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 ggcgtttccc cggtgcccgg gtgccatggc tcagtgtgca gacagccgca 2000
 ccctcaccac tgcgcctcat ggatctactc tccaagaagc acccgctgga 2050
 cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgaacttc 2100
 tgaaccgtg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150
 atgcatttcc aagccttcca ccagggtgtg gcccaccac aaggcctgg 2200
 gcccacagag ctgggcctg acactggccg ctttgatcgc caggcagcca 2250
 gcgagcgctg cttotacaac tccgactacg tggcagccc tgggcgcctg 2300
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 gctgtggcct ccacgtattt atgcagtaca gtctgctga ccgcagccct 2850
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gagctgagga gggggcatct cccaacttct ccccttttga cccctgccga 2950
gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro	1	5	10	15
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser	20	25	30	
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro	35	40	45	
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg	50	55	60	
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly	65	70	75	
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro	80	85	90	
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg	95	100	105	
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu	110	115	120	
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val	125	130	135	
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe	140	145	150	
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val	155	160	165	
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala	170	175	180	
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Phe	Asp	Trp	Phe		185	190	195	
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala	200	205	210	
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr	215	220	225	
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly	230	235	240	
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu	245	250	255	
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile	260	265	270	

Val Ser Ala Arg	Pro Asp Glu Trp Leu Gly Arg Cys Ile Leu Asp	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp His Glu Gly Val His Tyr	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu Pro Val Gln Glu Gly Asp	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala His Pro Val Arg Asp Pro	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala Phe Ala Arg Ala Glu Leu	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu Leu Gln Trp Glu Ile Gln	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly Asp Arg Ala Ala Ala Trp	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg Pro Ala Ser Arg Phe Glu	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu Gln His Ala Phe Ser Cys	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu Arg Gly Ala Asp Arg Ala	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala Leu Glu Glu Leu Asn Arg	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln Lys Gln Gln Leu Val Asn	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro Gln Gly Gly Arg Arg Pro	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg Pro Leu Ser Arg Val Glu	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu Ala Ser Arg Leu Thr Val	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg Asp Leu Ala Pro Gly Phe	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu Glu Pro Gly Asp Ala Ala	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Tyr Glu Pro Arg Gln Ala Gln	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala Pro Val Lys Ala His Val	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly Ala Arg Val Pro Trp Leu	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
	770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgaatgttctg 20

<210> 329

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcattgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcaactgggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggcgg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
gctctctctg attggcaagc gctggccacc tccccacacc ccttgogaac 100
gctccoctag tggagaaaag gtagtagtat tagccaattc ggcaggggccc 150
gcttttttaga agcttgattt cctttgaaga tgaagacta gcggaagetc 200
tgctctcttc ccagtgggc gagggaaact ggggcgattg gctgggaact 250
gtatccacc aaatgtcacc gatttcttc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctggcgg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag ggggggggat 450
 gattgtcgcg ctgcgaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgcccctga gaccctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccc 600
 gcccccgcgc tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtcgcctgtg ggggaaagc gggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa ccagactcc 750
 catggttatg acaaggaccc cgttttgac gtctggaaca tgcgacttgt 800
 cttctctttt ggcgctctca tcactcctgt ccttggcagc accttgttg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900
 aggccttgta aataccgaga ggccaatggc cttcccatca tggaaatccaa 950
 ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagtgt 1000
 ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5					10					15
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
				20					25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
				35					40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65					70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80					85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Leu	Gly	Ser	Thr	Phe	
				95					100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
				110					115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
				125					130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
				140					145					150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttgggt tgagcgcgcg ccgtcttttg gcggcagcgg 50
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aggactgtgg tcgcccgcgc cgctgtggcg ggaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgtatg 200
agaagaaccc agactcccat gggtatgaca aggaccccg tttggacgctc 250
tggaacatgc gacttgtctt ctctttggcg gtctccatca tcctggctct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgtg 350
cccgcgcgca agctgagagg ctgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg ctctgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgcccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggtta tgccgcttgc tctgctcgtc ctgttgcctc tggggcccg 50
cggtggtgct cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
tcataccccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcacgggaa ggagtgtccc attacaggct 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacaaa ggccttttga ggacccgata ctgggggcca 300
cccttctcgc aggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttggaa ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccactg cctccttcaa acccctgggt ctggccaatg acactgacca 500
ctactttctg cgtatgtctg tgcctccgog ggaggtggtc tgcaccgaaa 550
acctaccccc ctggaagaag ctcttgccct gtatgtccaa ggcaggcctc 600
tctgtctctg tgaaggcaga tcgcttgttc cacaccagct accactccca 650
ggcagtgcat atccgccctg tttgcagaaa tgcacgtgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaacctt 800
cacggagccc tgcccctgg cttcagagag ccgagtcctat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatata aggacgtcat cctaggcact cggaaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaaaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050
ctgcatgccc agcgggtacgt gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc ccgtgtctgc 1150
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atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgcccaggag cggctgcaac cccacctct ggagatgctg attcagctgc 1300
cggccaaact agtcaccaag gtttccatcc agtttgagcg ggogctgctg 1350
aagtggacgg agtacacgcc agatcctaac catggcttct atgtcagccc 1400
atctgtcctc agcgccttg tgcccagcat ggtagcagcc aagccagtgg 1450
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tctaactact ttgtgcggt ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcaactg 1600
tggtggccgt gtgctacggc tccttctaca atctcctcac ccgaaccttc 1650
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tatccggcgc gcccgaggtg tccccccact ctgattcttg ccttttccag 1750
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tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttct cactgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtgtt cggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaagtga tgggggtgtc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	1	5	10	15
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	20	25	30	35
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	35	40	45	50
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	50	55	60	65
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	65	70	75	80
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	80	85	90	95
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	95	100	105	110
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	110	115	120	125
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	125	130	135	140
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	140	145	150	155

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg Glu Val Val Cys Thr Glu		170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu Pro Cys Ser Ser Lys Ala		185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp Arg Leu Phe His Thr Ser		200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg Pro Val Cys Arg Asn Ala		215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu Arg Gln Thr Leu Ser Val		230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln Gly Lys Lys Asp Trp Ser		245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu Thr Glu Pro Cys Pro Leu		260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln		275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro Pro Pro Thr Thr Thr Tyr		290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr Asp		305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile		320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val		335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln		350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg		365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg		380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn		395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro Ala Gln Asp Arg Leu Gln		410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln Leu Pro Ala Asn Ser Val		425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg Ala Leu Leu Lys Trp Thr		440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly Phe Tyr Val Ser Pro Ser		455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val
				470					475					480
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser
				485					490					495
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu
				500					505					510
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile
				515					520					525
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr
				530					535					540
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Pro	Arg	Thr	Gly	
				545					550					555
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly
				560					565					570

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca cacctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggtcct catggtgtct ctcttcttg 50
 tgaccctggt ggctgtggaa ggagttaaag aggttataga gaaagcagg 100
 gtttgcctcag ctgacaacgt acgctgtctc aagtccgac ctccccagt 150
 tcacacagac caggactgtc tgggggaaag gaagtgtgt tacctgcact 200
 gtgcttcaa gtgtgtgatt cctgtgaagg aactggaaga agggagaaa 250
 aaggatgaag atgtgtcaag gccataacct gagccaggat gggaggccaa 300
 gtgtccaggc tctctctcta ccagggtgtc tcagaaatga tgctgggtcc 350
 tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
 gagaacttga atatggaaga agcaataccc aacccccacca aagaaaacct 450
 gagcttgaag tctttttccc caaaaagagg gaagagtcac aaaaagtcca 500
 gacccacagg acggtacttt cctctctac ctggtgtctc tccctaatagc 550
 tcatgaatgg acccctcatg aatgaaacca gtgccttat aagagacccc 600
 aaagagctgc cttgccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag agaaactggt cctcaccaga tgctgaatct gctgggtcct 700
 tgatcttga cttccagacc tctagaactg taagaaataa atatttctg 750
 tttataatcc aa 762

<210> 345

<211> 111

<212> PRT

<213> Homo sapiens

<400> 345

Met	Gly	Ser	Ser	Ser	Phe	Leu	Val	Leu	Met	Val	Ser	Leu	Val	Leu
1				5					10					15
Val	Thr	Leu	Val	Ala	Val	Glu	Gly	Val	Lys	Glu	Gly	Ile	Glu	Lys
				20					25					30
Ala	Gly	Val	Cys	Pro	Ala	Asp	Asn	Val	Arg	Cys	Phe	Lys	Ser	Asp
				35					40					45
Pro	Pro	Gln	Cys	His	Thr	Asp	Gln	Asp	Cys	Leu	Gly	Glu	Arg	Lys
				50					55					60
Cys	Cys	Tyr	Leu	His	Cys	Gly	Phe	Lys	Cys	Val	Ile	Pro	Val	Lys
				65					70					75
Glu	Leu	Glu	Glu	Gly	Gly	Asn	Lys	Asp	Glu	Asp	Val	Ser	Arg	Pro
				80					85					90
Tyr	Pro	Glu	Pro	Gly	Trp	Glu	Ala	Lys	Cys	Pro	Gly	Ser	Ser	Ser
				95					100					105
Thr	Arg	Cys	Pro	Gln	Lys									
				110										

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtcac 50
 ttccttgcca ggaacctga ggggtgagac tcccagctgc ctacatcaag 100
 gccccaggac atgcagaacc ttctctataga acccgaccca ccacatagag 150
 gtctctcctg tggagatgca ggcacctgag ccaaggcgctc cagtgtgtcct 200
 tgcttctggc tgtcctggctc ttctttctct tcgccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaaccattaa 300
 agaaagggtc ctacagtccc tggcaaaagc taagtcccag gcacccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccacagc caaggcccac accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaagggtg cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 acactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcacaatca tggaagagcc agcacacaaa gacgacccaa ggaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgcaga gaagcaccag 700
 ggcaaaagcg caaccacagc caagacgctc attccaaaaa gtcagcacag 750
 aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatccca cctaaggaga agaaacctca ggccacccca 850
 cccctgccc ctttccagag cccacgacg cagagaaacc aaagactgaa 900
 ggcgcgaac ttcaaatctg agcctcggtg ggattttgag gaaaaatata 950
 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
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 aacactttgc accacccttt ggcttcattg agctcaacta ctcttgggtg 1150
 cagaaggctg tgacacgctt ccctccagtg cccagcagc agctgctcct 1200
 ggcagcctc cccgctggga gcctccggtg catcacctgt gccgtggtg 1250
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 cacgactacg tgttccgatt gagcggaagt ctcattaaag gctacgaaca 1350
 ggatgtgggg actcggacat ccttctacgg ctttaccgcc ttctccctga 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

ggggaaggacg tccgctactt gcacttcctg gaaggcaccg gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctggttcag gcacagaccc cagggaagctt ttcgggaagc cctgcacatg 1600
 gacagggtacc tgttgctgca cccagacttt ctccgataca tgaagaacag 1650
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 gtgagtctt atggcttcac cactgagggc catgagcgct tttctgatca 1800
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 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctcttgctt gctccaaggc acaggatata 2000
 gtgggaatct tgagactctt tggccatttc coattggctca gactaagctc 2050
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 caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgct ttttaagctat ttgacaaactc tacgtgtgtg 2450
 agaaaaactga taataatata aatgattgtt gtccatggaa agggcaataa 2500
 attttctaca gtgaaaaaaaa aaaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

65										70					75				
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Pro	Leu	Asn	Thr	Gln	Thr				
				80						85					90				
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn					
				95					100					105					
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln					
				110					115					120					
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn					
				125					130					135					
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg					
				140					145					150					
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln					
				155					160					165					
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val					
				170					175					180					
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu					
				185					190					195					
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val					
				200					205					210					
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro					
				215					220					225					
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe					
				230					235					240					
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn					
				245					250					255					
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe					
				260					265					270					
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile					
				275					280					285					
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn					
				290					295					300					
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp					
				305					310					315					
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Gly	Gly	Phe	Met	Glu	Leu					
				320					325					330					
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val					
				335					340					345					
Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu					
				350					355					360					
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn					
				365					370					375					
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe					

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln				
	410	415			420
Ser Leu Leu Ile Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu				
	425	430			435
Gly Lys Asp Val Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp				
	440	445			450
Thr Glu Trp Leu Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser				
	455	460			465
Lys Asn Leu Phe Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg				
	470	475			480
Glu Ala Leu His Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe				
	485	490			495
Leu Arg Tyr Met Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp				
	500	505			510
Gly Ala His Trp Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu				
	515	520			525
Leu Leu Thr Ala Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly				
	530	535			540
Phe Ile Thr Glu Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp				
	545	550			555
Thr Ser Trp Lys Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys				
	560	565			570
Leu Glu Arg Glu Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile				
	575	580			585
Arg Leu Tyr Gln Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn				
	590	595			600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
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<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
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 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90

Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
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 caggcatcgc ctcagctgtg atcctctttg ttgtgtgggt tgcccaccacc 400
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 tgcagccagt ataccatac ccccaggacc ccaaagctgg ccttgacccc 550
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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

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			20						25					30
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
			35						40					45
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
			50						55					60
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
			65						70					75
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala
			80						85					90
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys
			95						100					105
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln
			110						115					120
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile
			125						130					135
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly
			140						145					150
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro
			155						160					165
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn
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185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
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tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttctc 250
gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
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tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700
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ctgtgaagat gagcacctat ctggtggcct tcatcatttc agattttgag 850
tctgtcagca agataacca gagtggagtc aaggtttctg tttatgctgt 900
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caagatcttg ctgctattcc ogactttcag tctggtgcta tggaaaactg 1050
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<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

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Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20					25					30
Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr
				35					40					45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro
				50					55					60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr
				65					70					75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr
				80					85					90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala
				95					100					105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu
				110					115					120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala
				125					130					135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His
				140					145					150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser
				155					160					165
Thr	Thr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr
				170					175					180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp
				185					190					195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu
				200					205					210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val

215										220										225																																			
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val						Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val				Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val			
				230																				235																	240														
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu						Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu				Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu			
				245																				250																	255														
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr						Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr				Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr			
				260																				265																	270														
Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala						Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala				Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala			
				275																				280																	285														
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro						Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro				Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro			
				290																				295																	300														
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln						Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln				Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln			
				305																				310																	315														
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				320																				325																	330														
Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	Ala	Ser	Ser	Lys	Leu						Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	Ala	Ser	Ser	Lys	Leu				Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	Ala	Ser	Ser	Lys	Leu			
				335																				340																	345														
Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	Ala	His	Gln	Trp	Phe						Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	Ala	His	Gln	Trp	Phe				Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	Ala	His	Gln	Trp	Phe			
				350																				355																	360														
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				365																				370																	375														
Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	Ser	Val	Ser	Val	Thr						Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	Ser	Val	Ser	Val	Thr				Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	Ser	Val	Ser	Val	Thr			
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His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	Phe	Gly	Lys	Cys	Phe						His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	Phe	Gly	Lys	Cys	Phe				His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	Phe	Gly	Lys	Cys	Phe			
				395																				400																	405														
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				410																				415																	420														
Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	Glu	Met	Phe	Asp	Asp						Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	Glu	Met	Phe	Asp	Asp				Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	Glu	Met	Phe	Asp	Asp			
				425																				430																	435														
Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	Asn	Met	Leu	Arg	Glu						Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	Asn	Met	Leu	Arg	Glu				Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	Asn	Met	Leu	Arg	Glu			
				440																				445																	450														
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				455																				460																	465														
Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	Glu	Asp	Leu	Trp	Asp						Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	Glu	Asp	Leu	Trp	Asp				Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	Glu	Asp	Leu	Trp	Asp			
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Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	Ser	Ser	Ser	His	Trp						Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	Ser	Ser	His	Trp					Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	Ser	Ser	His	Trp				
				500																				505																	510														
His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	Met	Asn	Thr	Trp	Thr						His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	Met	Asn	Thr	Trp	Thr				His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	Met	Asn	Thr	Trp	Thr			
				515																				520																	525														
Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	Thr	Val	Arg	Gly	Arg						Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	Thr	Val	Arg	Gly	Arg				Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	Thr	Val	Arg	Gly	Arg			

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				545					550					555
Ala	Pro	Asp	Thr	Gly	Tyr	Leu	Trp	His	Val	Pro	Leu	Thr	Phe	Ile
				560					565					570
Thr	Ser	Lys	Ser	Asn	Met	Val	His	Arg	Phe	Leu	Leu	Lys	Thr	Lys
				575					580					585
Thr	Asp	Val	Leu	Ile	Leu	Pro	Glu	Glu	Val	Glu	Trp	Ile	Lys	Phe
				590					595					600
Asn	Val	Gly	Met	Asn	Gly	Tyr	Tyr	Ile	Val	His	Tyr	Glu	Asp	Asp
				605					610					615
Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala
				620					625					630
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln
				635					640					645
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu
				650					655					660
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln
				665					670					675
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg
				680					685					690
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg
				695					700					705
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly
				710					715					720
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala
				725					730					735
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr
				740					745					750
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val
				755					760					765
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu
				770					775					780
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser
				785					790					795
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn
				800					805					810
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp
				815					820					825
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly
				830					835					840
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser			
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg		
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu		
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile		
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg		
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935		940		

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cgggtcatga ggcgggtatt actgctggcc ctctctgggt 50
 tcatctctccc actgccagga gtgcaggcgc tgctctgccca gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgaacta ccccggaat ggacccctaa 150
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgtca 200
 ttgagagcgg accccaagtg agcctgggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagcccg cgtcaactgag caccggatgg gccccggcct 300
 ctccctgata tctacacct tcgtgtgcg ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctcccg ctttggggcc cacagccccc agcagaccca 400
 ggatccttga ggtgccagct ctgctgtct atggaaggct gctctggagg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tctcaggct caggggagga ggcattctt ccaatctgag agtccaggga 550
 tgcagcccc agccaggttg caactgtct aatgggacac aggaaattgg 600
 gcccggtggg atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttggctca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt ggggctcaaa attccagaa gaccaccatc 850
 cactcagccc ctctctgggt gcttgtggcc tctataccc acttctgtct 900
 ctcggaacctg tgcaatagtg ccagcagcag cagcgttctg ctgaaactccc 950

tccctcctca agctgccct gtcccaggag accggcagtg tctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgcc 1050
 cagggcgccc actcattggt atgatgggta cattcatctc tcaggaggtg 1100
 ggctgtccac caaatgagc attcagggtc gcgtggccca acctccagc 1150
 ttctgttga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggctgagg 1250
 gccctggagtc tctcacttg ggggtggggc tggcaactggc ccacgcgtg 1300
 tgggtgggag tggtttgccc ttctgtctaa ctctattacc ccacagattc 1350
 ttcacgcgtg ctgaccaccc aactcaacc tccctctgac ctacatacct 1400
 aatggccttg gacaccagat tcttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gccctggagca tccggacttg ccctatggga gaggggacgc tggaggagtg 1550
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
1				5						10				15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

	155		160		165
Arg Gly Gly Gly	Ile Phe Ser Asn Leu	170	Arg Val Gln Gly Cys Met	175	180
Pro Gln Pro Gly	Cys Asn Leu Leu Asn	185	Gly Thr Gln Glu Ile Gly	190	195
Pro Val Gly Met	Thr Glu Asn Cys Asn	200	Arg Lys Asp Phe Leu Thr	205	210
Cys His Arg Gly	Thr Thr Ile Met Thr	215	His Gly Asn Leu Ala Gln	220	225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn	230	Thr Glu Met Cys Glu Val	235	240
Gly Gln Val Cys	Gln Glu Thr Leu Leu	245	Leu Ile Asp Val Gly Leu	250	255
Thr Ser Thr Leu	Val Gly Thr Lys Gly	260	Cys Ser Thr Val Gly Ala	265	270
Gln Asn Ser Gln	Lys Thr Thr Ile His	275	Ser Ala Pro Pro Gly Val	280	285
Leu Val Ala Ser	Tyr Thr His Phe Cys	290	Ser Ser Asp Leu Cys Asn	295	300
Ser Ala Ser Ser	Ser Ser Val Leu Leu	305	Asn Ser Leu Pro Pro Gln	310	315
Ala Ala Pro Val	Pro Gly Asp Arg Gln	320	Cys Pro Thr Cys Val Gln	325	330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser	335	Pro Arg Met Thr Cys Pro	340	345
Arg Gly Ala Thr	His Cys Tyr Asp Gly	350	Tyr Ile His Leu Ser Gly	355	360
Gly Gly Leu Ser	Thr Lys Met Ser Ile	365	Gln Gly Cys Val Ala Gln	370	375
Pro Ser Ser Phe	Leu Leu Asn His Thr	380	Arg Gln Ile Gly Ile Phe	385	390
Ser Ala Arg Glu	Lys Arg Asp Val Gln	395	Pro Pro Ala Ser Gln His	400	405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	410	Ser Leu Thr Trp Gly Val	415	420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp	425	Trp Gly Val Val Cys Pro	430	435

Ser Cys

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
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 cctgcctgcg ctccagatga ggggaatct ggccctgggt ggcttctaa 100
 tcagcctggc ctctctgtca ctgctgcat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatcctc gtcctgggcc tcaagggga 200
 tgcgggagag aaggagaca aaggcgcccc cggacggcct ggaagagtcg 250
 gccccacggg agaaaaagga gacatggggg acaagagaca gaaaggcagt 300
 gtgggtcgtc atggaaaaat tggctccatt ggctctaaag gtgagaagg 350
 agattccggt gacataggac cccctgggtc taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgcgg 500
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
 gctacgcgga cgcacagctg tcttgccagg gccgcggggg cagcctgagc 600
 atgcccagg acgaggtgc caatggcctg atggccgcat acctggcgca 650
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 ggcctctcgt gtactctgac cactccccc tgccgacctt caacaagtgg 750
 cgcagcggtg agcccacaa tgctacagac gaggaggact gcgtggagat 800
 ggtggcctcg gccggtgga acgacgtggc ctgccacacc acctgtact 850
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 ccattggggg cccacatgt cctgcagggt ttggcaggga cagagcccag 950
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagttagag gctgtgtct aaactgagaa aatggcctat gcttaaggag 1050
 aaaatgaaag gtgtcctggg gtgctgtctc tgaagaagca gagtttcat 1100
 acctgtattg tagcccaaat gtcattatgt aattattacc cagaattgct 1150
 cttccataaa gctgtgcct ttgtccaagc tatacataa aatctttaag 1200
 tagtgagta gttaagtcca aaaaaaaaa aaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

agtgactgca gccttcttag atcccctoca ctccgtttct ctctttgcag 50

gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100

gttctttgat cctgccagac caccagcccc ccggcacaga gctgctocac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtggtt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgtctcca 300
 gagactcttc aaaagccact catctctgga gggattgtc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctccoga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gagggttcct cggcccttc 500
 atcccaatca gcttggatcc acagaaaagt ctccctggg aacagaggag 550
 cagagacctt tataagactc tctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atcctcaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 caggtgcgca cgtctctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactcctct ccatcttttc tacctgaccc tgggtgtggaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 ctgagattcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu
1			5						10					15
Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20					25					30
Val	Pro	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Asp	Pro	Asp	Leu	Tyr	Gln
				35				40						45
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50				55						60
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65				70						75
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80				85						90
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95				100						105
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110				115						120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

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gacctgtgtg cccgcgtgtg cgcgcgtgct accgcgtctg ctggacgcgg 100
gagacgccag cgagctgggtg attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcctcat agttgtgtgca 200
ggagtgaggc catgagctgc gtctcgggtg gtgtcatccc ctgggggctg 250
ctgttccttg tctgcggatc ccaaggctac ctctgcacca acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactccccgg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgtctgcac 400
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtagat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggccttg 500
gccaccagcc tgctctgttc cccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggt ctctcttggc agggggaggat cccggctctg 600
ttctgttttg ttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgcg atggcacaat cgtcatgccc tgaaacctta gactccccgg 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatggctg ccagctagat tttaaatatt ttgtggagat gggggctctg 800
ctacgttgcc caggctggtc ttgaactcct aggctcaagc aatcctcctg 850
cctcagcctc tcaaagtgtc aggattatag gcatgagtca cctgtcttg 900
ctctggtctt gttcttaaca ttctgcaaaa acaacacacg tgggttcctc 950
gtgcagagcc tgctcgttg ccttcatgtc actcttggtg gctcactgg 1000
gaacacagct ctcagccttt cccacctgga ggcagagtgg ggagggggccc 1050
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accaccctga cttctcctta gcccggtgta gcctcacttt ccactgggag 1150
agtctctct cgcgtggttg ccatgactgt gagataagc gaggctgtga 1200
agggcccgcc acagactgac ctgcctcccc aacccttagg ctttgtctaac 1250
cgggaaagga gctaacgggtg acagaagaca gccaaagtca accctcccg 1300
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa ctctcttctt ggctggtttt ccagaactac 1400
 agaggaatgg accacagtct tccagggtcc ctctcgtcc accaacggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cactgccacg cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatgggtg gtgcgcacct gtagtccacg ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtgcagg ctgcagtggg ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

Met	Ser	Cys	Val	Leu	Gly	Gly	Val	Ile	Pro	Leu	Gly	Leu	Leu	Phe
1				5					10					15
Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20					25					30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
				35					40					45
Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
				50					55					60
Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
				65					70					75
Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
				80					85					90
His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
				95					100					105
Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110					115					120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125					130					135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
				140					145					150
Trp	His	Asn	Arg	His	Ala	Leu	Lys	Pro						
				155										

<210> 362

<211> 422

<212> DNA

<213> Homo sapiens

<400> 362

aaggagagc caccgggact tcagtgtctc ctccatccca ggagcgcagt 50

ggccaactatg ggggtctgggc tgccccctgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggg cggggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctctcatgag tccagcttcc tgggaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcaggggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccggtt tttgggccc ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363

<211> 78

<212> PRT

<213> Homo sapiens

<400> 363

Met	Gly	Ser	Gly	Leu	Pro	Leu	Val	Leu	Leu	Leu	Thr	Leu	Leu	Gly
1				5						10				15
Ser	Ser	His	Gly	Thr	Gly	Pro	Gly	Met	Thr	Leu	Gln	Leu	Lys	Leu
			20						25					30
Lys	Glu	Ser	Phe	Leu	Thr	Asn	Ser	Ser	Tyr	Glu	Ser	Ser	Phe	Leu
			35						40					45
Glu	Leu	Leu	Glu	Lys	Leu	Cys	Leu	Leu	Leu	His	Leu	Pro	Ser	Gly
			50						55					60
Thr	Ser	Val	Thr	Leu	His	His	Ala	Arg	Ser	Gln	His	His	Val	Val
			65						70					75
Cys	Asn	Thr												

<210> 364

<211> 826

<212> DNA

<213> Homo sapiens

<400> 364

aattgtatct gtgtaattgt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaga actctttaaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattotgt 150
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<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

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Thr	Val	Phe	Cys	Val	Leu	Leu	Ile	Phe	Thr	Ile	Ala	Glu	Ala	Ser
				20					25				30	
Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
				35					40				45	
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
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Leu	Pro	Ser	Asp	Cys	Ser	Lys								
				65										

<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

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Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly	35	40	45	
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe	50	55	60	
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln	65	70	75	
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu	80	85	90	
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu	95	100	105	
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala	110	115	120	
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr	125	130	135	
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser	140	145	150	
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met	155	160	165	
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly	170	175	180	
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe	185	190	195	
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr	200	205	210	

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
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 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile
 260 265 270
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly
 275 285
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly
 290 295 300
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln
 305 310 315
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val
 320 325 330
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr
 335 340 345
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe
 350 355 360
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro
 365 370 375
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile
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 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys
 395 400

<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

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<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu	1	5	10	15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly	20	25	30	
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	35	40	45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	50	55	60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	65	70	75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	80	85	90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	95	100	105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	110	115	120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	125	130	135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	140	145	150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	155	160	165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	170	175	180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	185	190	195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	200	205	210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240	

Gly Arg Phe Val	Ala Ser Cys Gly Phe Thr	Pro Asp Val Lys Val	245	250	255
Trp Glu Val Cys	Phe Gly Lys Lys Gly Glu Phe Gln Glu Val Val		260	265	270
Arg Ala Phe Glu	Leu Lys Gly His Ser Ala Ala Val His Ser Phe		275	280	285
Ala Phe Ser Asn	Asp Ser Arg Arg Met Ala Ser Val Ser Lys Asp		290	295	300
Gly Thr Trp Lys	Leu Trp Asp Thr Asp Val Glu Tyr Lys Lys Lys		305	310	315
Gln Asp Pro Tyr	Leu Leu Lys Thr Gly Arg Phe Glu Glu Ala Ala		320	325	330
Gly Ala Ala Pro	Cys Arg Leu Ala Leu Ser Pro Asn Ala Gln Val		335	340	345
Leu Ala Leu Ala	Ser Gly Ser Ser Ile His Leu Tyr Asn Thr Arg		350	355	360
Arg Gly Glu Lys	Glu Glu Cys Phe Glu Arg Val His Gly Glu Cys		365	370	375
Ile Ala Asn Leu	Ser Phe Asp Ile Thr Gly Arg Phe Leu Ala Ser		380	385	390
Cys Gly Asp Arg	Ala Val Arg Leu Phe His Asn Thr Pro Gly His		395	400	405
Arg Ala Met Val	Glu Glu Met Gln Gly His Leu Lys Arg Ala Ser		410	415	420
Asn Glu Ser Thr	Arg Gln Arg Leu Gln Gln Gln Leu Thr Gln Ala		425	430	435
Gln Glu Thr Leu	Lys Ser Leu Gly Ala Leu Lys Lys		440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
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 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
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Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

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 gccaccacag ccatggcgaa ccccgggctg gggtctgttc tggcgctggg 200
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<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

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Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr	20	25	30	
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser	35	40	45	
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile	50	55	60	
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Ala	Val	Gly		65	70	75	
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu	80	85	90	
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	100	Phe	Ser	His	Ala	Ala	95	100	105	
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Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

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<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
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35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
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Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

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Ile	Pro	Met	Val	Thr	Pro	Pro	Pro	Pro	Pro	Pro	Val	Phe	Ser	Leu	Leu				
									290						300				
Lys	Ile	Ser	Gln	Arg	Ile	Val	Cys	Leu	Val	Leu	Asp	Lys	Ser	Gly					
				305					310					315					
Ser	Met	Gly	Gly	Lys	Asp	Arg	Leu	Asn	Arg	Met	Asn	Gln	Ala	Ala					
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Lys	His	Phe	Leu	Leu	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly					
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Met	Val	His	Phe	Asp	Ser	Thr	Ala	Thr	Ile	Val	Asn	Lys	Leu	Ile					
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Gln	Ile	Lys	Ser	Ser	Asp	Glu	Arg	Asn	Thr	Leu	Met	Ala	Gly	Leu					
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Pro	Thr	Tyr	Pro	Leu	Gly	Gly	Thr	Ser	Ile	Cys	Ser	Gly	Ile	Lys					
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Tyr	Ala	Phe	Gln	Val	Ile	Gly	Glu	Leu	His	Ser	Gln	Leu	Asp	Gly					
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Ser	Glu	Val	Leu	Leu	Leu	Thr	Asp	Gly	Glu	Asp	Asn	Thr	Ala	Ser					
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Ser	Cys	Ile	Asp	Glu	Val	Lys	Gln	Ser	Gly	Ala	Ile	Val	His	Phe					
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Ile	Ala	Leu	Gly	Arg	Ala	Ala	Asp	Glu	Ala	Val	Ile	Glu	Met	Ser					
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Lys	Ile	Thr	Gly	Gly	Ser	His	Phe	Tyr	Val	Ser	Asp	Glu	Ala	Gln					
				455					460					465					
Asn	Asn	Gly	Leu	Ile	Asp	Ala	Phe	Gly	Ala	Leu	Thr	Ser	Gly	Asn					
				470					475					480					
Thr	Asp	Leu	Ser	Gln	Lys	Ser	Leu	Gln	Leu	Glu	Ser	Lys	Gly	Leu					
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Thr	Leu	Asn	Ser	Asn	Ala	Trp	Met	Asn	Asp	Thr	Val	Ile	Ile	Asp					
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Ser	Thr	Val	Gly	Lys	Asp	Thr	Phe	Phe	Leu	Ile	Thr	Trp	Asn	Ser					
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Leu	Pro	Pro	Ser	Ile	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met					
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Glu	Asn	Phe	Thr	Val	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser					
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Ile	Pro	Gly	Thr	Ala	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln					
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Ala	Lys	Ala	Asn	Pro	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg					
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Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr					
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Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu					
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Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser					
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Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val					
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Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp					
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His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn					
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Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu					
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<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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 tgggctttt acaacagaaa tcaaatctc cgctttgcct gcaaaagtaa 2450
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 tataagccta atggtgtgga ggttttgatg gtgtttacaa tacactgaga 2550
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<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
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Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
		20							25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Gln	Leu	Ala	Leu	
			35						40					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
			50						55					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
			65						70					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
			80						85					90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	

Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp
 410 415 420
 Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn
 425 430 435
 Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp
 440 445 450
 Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val
 455 460 465
 Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg
 470 475 480
 Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln
 485 490 495
 Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu
 500 505 510
 Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln
 515 520 525
 Lys Thr Ser Ser Lys Lys Thr
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<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaagggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtag aatcctggca taatatacgg ccacatgat gcagtcgc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

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actctgtcaa ccaggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggatacca tgaagaatac 150
ctcttcaaag ccatggttagc tttctccatg agaaaagttc ccaacagaga 200
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cattctgggt tgtggttaca gaccttcaa aaaatcacac ctttctgct 300
gttgaggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttctttcta aatgacaaa ctctggaatt ttaaaaaatc ctttccacac 400
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gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaa atgatcaca ttgaaaatgg catccctct 600
gatccctgg acatgaagg gggcatatta atgatgcctt catgacagag 650
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tttagaataa agatcaggca tatgtatata tttcacact tcaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
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tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387
<211> 212
<212> PRT
<213> Homo sapiens

<400> 387
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Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
20 25 30
Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
35 40 45
Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
50 55 60
Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
65 70 75
Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
80 85 90
Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
95 100 105
Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
110 115 120
Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
125 130 135
Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
140 145 150
Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
155 160 165
Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
170 175 180
Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
185 190 195
Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
200 205 210
Pro Ser

<210> 388
<211> 1371
<212> DNA
<213> Homo sapiens

<400> 388
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 gccaaaggctg ggtttccctc atgtatggca agagctctac tcgtgcgggtg 150
 cttctctctc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggtg tgctggagcg tgtaaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgcc cgtgtgggtga tgctctaaca 300
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaaccat gagtggcggtg tttaaggacc 400
 ggggtgtctg ggaagggaat cctgagcggt acgatgcctc catcctctc 450
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 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
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<210> 389

<211> 215

<212> PRS

<213> Homo sapiens

<400> 389

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5

10

15

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				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 390
 ccgaggccat ctagaggcca gagg 24

<210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 391
 acaggcagag ccaatggcca gagg 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggaccttttg gcagacgtgc tcatg 5

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
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 agcagtcctg gtactcttgg gagtttccat cttctgtgtc tctgccaga 100
 atccgacaac agctgtctcca gctgacacgt atccagctac tggctcctgt 150
 gatgatgaag cccctgatgc tgaaccact gctgtgtcaa ccatgctgcg 200
 cactgtgtgt cctaccactg caaccaccgc tgcttctacc actgctctga 250
 aagacattcc agttttacc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgtc tctgtgtatt tcatccaact acttaccttg cctacgata 400
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 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Gly Val Ser Ile Phe
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 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gctccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
caggacaca ctctaccatt cgagg 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
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gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
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gcaggagggg gacagttctg ttgtgcttgg ttggacagta agagggctct 350
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ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggtcggattt 500
gctcggggc catggtcctt gtctagggca gcaattctca acctctctgc 550
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cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacag aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399

<211> 120

<212> PRT

<213> Homo sapiens

<400> 399

Met	Leu	Pro	Pro	Ala	Leu	Pro	Pro	Ala	Leu	Val	Phe	Thr	Val	Ala	
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Trp	Ser	Leu	Leu	Ala	Glu	Arg	Val	Ser	Trp	Val	Arg	Asp	Ala	Glu	
				20					25					30	
Asp	Ala	His	Arg	Leu	Gln	Pro	Phe	Val	Thr	Glu	Arg	Thr	Leu	Gly	
				35					40					45	
Lys	Val	Gln	Arg	Trp	Ser	Gly	Val	His	Thr	Gln	Thr	Gly	Gly	Arg	
				50					55					60	
Ala	Gly	Gly	Gly	Gln	Phe	Cys	Cys	Ala	Trp	Leu	Asp	Ser	Lys	Arg	
				65					70					75	
Val	Leu	Ala	Ser	Pro	Gly	Trp	Gly	Ala	Ala	Asn	Ser	Ile	Lys	Asn	
				80					85					90	
Gln	Arg	Val	Trp	Ala	Pro	Ala	Thr	Glu	Ser	Ser	Ala	Gln	Leu	Leu	
				95					100					105	
Cys	Cys	Trp	Pro	Val	Gly	Val	Ala	Arg	Gly	Gly	Ala	Leu	Cys	Gln	
				110					115					120	

<210> 400

<211> 893

<212> DNA

<213> Homo sapiens

<400> 400

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tagaagtcca gctgaggagc gcctggctgg gccctgcta ccgagaattt 450
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 cggggacaaa ggcagaggat gtagcccatc tggggagggg tggaggaagg 800
 acatgtacc ttctatgcct acacaccctc cattaaagca gactcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val	1	5	10	15
Thr	Arg	Pro	Ala	Ser	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu	Ala	20	25	30	
Gln	His	Glu	Glu	Leu	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln	Leu	35	40	45	
Gly	Gln	Ala	Leu	Asn	Gly	Val	Tyr	Arg	Thr	Glu	Gly	Arg	Leu	50	55	60		
Thr	Lys	Ala	Arg	Asn	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile	Glu	65	70	75	
Leu	Leu	Gly	Gln	Glu	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln	Glu	80	85	90	
Leu	Arg	Ala	Ser	Leu	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile	Leu	95	100	105	
Gln	Leu	Gln	Ala	Glu	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val	Ala	110	115	120	
Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val	125	130	135	
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu	140	145	150	
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala	155	160	165	
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln	170	175	180	
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala				

Leu Pro Ala

<210> 402

<211> 1915

<212> DNA

<213> Homo sapiens

<400> 402

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 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
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 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
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 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750
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 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
1				5					10					15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Asp	Gln	Thr	Thr	
				20					25					30
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
				35					40					45
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu
				50					55					60
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr
				65					70					75
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala
				80					85					90
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile
				95					100					105
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile
				110					115					120
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn
				125					130					135
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe
				140					145					150
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg

155	160	165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser		
170	175	180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser		
185	190	195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys		
200	205	

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
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<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
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<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
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 tcggccaagc ctgtggccca gcctgtcgcg gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaaccacct cggcacccct aacctcgta 250
 agctctcgtc gacgagcctg ggcaccccg tgaaccacct catagagggc 300
 tcaccagaag gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
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<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
1				5					10					15
Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val
				80					85					90
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly	
				95					100					

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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 agtctctctg tctcgtctct cctggcacag gtgtggtctg taccggctt 150
 ggccccagct cctcagtcgc cagagacccc agccctcag aaccagacca 200
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 tgatgtcaaa gagactttct tcaattttatc caagaggat tttgatacag 650
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 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
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 aagttgatga aaggggcact gaggcagtg caggaattct gtcagaaatt 1300
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 ccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatattt 1650
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 cccactactc agaatggcat gctgottaag acttttagat tgtttatttc 1950
 tggaaatttt catttaattg ttttggacca tggttgacca tggttaactg 2000
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 taaattgata catatttttt aaaaaaaaa aaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys	Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val	290	295	300
Val Leu Met Glu	Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr	305	310	315
Leu Thr Thr Asp	Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr	320	325	330
Arg Asn Met Glu	Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys	335	340	345
Tyr Glu Met His	Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile	350	355	360
Phe Ser Pro Phe	Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg	365	370	375
Asn Leu Gln Val	Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val	380	385	390
Asp Glu Arg Gly	Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile	395	400	405
Thr Ala Tyr Ser	Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe	410	415	420
His Phe Met Ile	Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu	425	430	435
Gly Arg Val Val	Asn Pro Thr Leu Leu	440		

<210> 411

<211> 636

<212> DNA

<213> Homo sapiens

<400> 411

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ccacccccag taggggtcca ggggccatca ctgccccgcg cctgtcccaa 550
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aataaaccccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1				5					10					15

Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
			20						25					30

Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
			35						40					45

Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
			50						55					60

Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
			65						70					75

Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
			80						85					90

Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
			95						100					105

Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
			110						115					120

Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
			125						130					135

Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
			140						145					150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200

gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat ttctccgca ctgagaatgg tggtatctac 300

cagaccttct gtgacatgac ctctgggggt ggcggtctga cctgtgtgac 350

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<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

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Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	
245	250	255
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu	Phe Tyr Arg	
305	310	

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50
 cggctgggag ccacagagc tgccgcatcc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tctggggag gctgcagggtg 150
 ctagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggcacatgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgtc aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450
 agtgtttacc agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
 ctatgcatto tgaagcaaag aaaggatcaa aatttgatgc tgggagcttt 600
 gttggtggta ttgtattaac gctggggagt ttatctattc tttacattgg 650
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
 aacatgatgc catcatttaa ggaatccat ggaccaagga tgggaatacag 750
 attgatgctg ccctatcaat taatttttgg ttattaatag tttaaaacaa 800
 tattctcttt ttgaaaatag tataaacagg ccattgcatat aatgtacagt 850
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
 tgaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaaacaa gtcttatctt ttttttttgg ctgggggtggg 1000
 ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
 tttgggtatc tttttagct cacataaaga acttcagtgc ttttcagagc 1150
 tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
 tgtagtagtt ggtotagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly	1	5	10	15
Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala	20	25	30	
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His	35	40	45	
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser	50	55	60	
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr	65	70	75	
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys	80	85	90	
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr	95	100	105	
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser	110	115	120	
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val				

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

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gcgatggcga cctctgtggg aggcctctct cggtctggct ccttgctcag 150

cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgag ctgtcagacg 200

ccgccaagaa ttctgaggat gtcagatgta aatgtatctg cctccctat 250

aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300

tgattgcctt catgttgttg agcccatgcc tgtgcgggg cctgatgtag 350

aagcatactg ttacacgtgt gaatgcaaat atgaagaaag aagctctgtc 400

acaatcaagg ttaccattat aatttatctc tcatttttgg gcccttctact 450

tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500

tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550

cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600

caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

tccaagagca gcgaagtct gtctttgacc ggcatgttgt ctcagctaa 700

ttgggaattg aattcaagg gactagaaag aaacaggcag acaactggaa 750

agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800

ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850

ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900

aaagtcagcc aataagtctt ttctatttgg tgacttttac taataaaaaa 950

aaatctgcct gtaaattatc ttgaagtctt ttactgggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 ttgtgtgttg ttgttttttg ttgtttgtt ttggtgggag agggggaggga 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaat agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctgttggtt ttccacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atoctagaac aaactggcca tttgctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaacccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtgtg ggttggtggt gcctctcttg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtctctt ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
1				5					10					15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Ala	Gln	Leu	
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Tyr	Met	Val	
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
185 190 195

Val Leu Ser

<210> 419
<211> 681
<212> DNA
<213> Homo sapiens

<400> 419
gcacctgcga ccaccgtgag cagtcacggc gtactccaca gtgcagagag 50
tcgctctggc ttctgggctt gtctcggctc tgctcgtgct gctgcccaag 100
gccttctcgt ccgcgggaa gcgcgaggag ccgcgcgcga cacctgaagg 150
aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctcag 200
atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250
tttgcaaaag ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
aagaggctgt atggggcaga ttattccaat ctacggtttt gggatttttt 350
tatataact gtacattcta tttaaggtaa gtagaatcat cctaatoata 400
ttacatcaat gaaaatctaa tatggcgata aaaatcattg totacattaa 450
aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
ctgcctcctc ttcatgaggt acttaggata gccattattt cagtttcaca 550
taagaatgtt tactcaatgt ttaagtgttt tgcccaaaaa ttcacaacta 600
acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
gagtgatata attcaatgca ctccctgcc a 681

<210> 420
<211> 128
<212> PRT
<213> Homo sapiens

<400> 420
Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

cgagctcagtg gcagctgtgg ggagatttca gtgoattgcc tcccctgggt 50

gctcttcctc ttggatttga aagttgagag cagcatgttt tgcccactga 100

aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150

ttgaatgttt ccccgccctga gctaacagtc catgtgggtg attcagctct 200

gatgggagtgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250

actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300

tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350

cttgatgggg gacatottat gcaatgatgg ctctctcctg ctcaaagatg 400

tgcaagaggcg tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450

gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500

gccccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550

ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600

tcaggacggc gcgcaaaagga ggagattgta ttctgttact accacaaact 650

caggatgtct gtggagtact cccagagctg gggccacttc cagaatcgtg 700

tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750

ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800

gaacctgtgt ttcaagaaaa ccattgtgct gcattgtcag ccggaagagc 850

ctcgaaact ggtgaccccg gcagccctga ggccctctgt cttgggtggt 900

aatcagtttg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950

cctgttctg atattgatcg tgaagaagac ctgtggaaaat aagagttcag 1000

tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
 ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
 aatcagaggc cacctacatg accatgcacc cagtttgccc ttctctgag 1200
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtccttca tctcagcagc 1300
 ggtggagact ctctcctgtg tgtgtcctgg gcaactctac cagtatttc 1350
 agactccgc tctccagct gtctcctgt ctctattgtt ggtcaataca 1400
 ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450
 gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
 acactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
 ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
 gaatcagaga taaaaccaa ccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Leu	Pro	Val	Leu	Leu	Asp	
1				5					10					15	
Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	
				20					25					30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	
				35					40					45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	
				50					55					60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	
				65					70					75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	
				80					85					90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	
				95					100					105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	
				110					115					120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	
				125					130					135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	
				140					145					150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	

155	160	165
Thr Lys Val Glu Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu Glu	
170	175	180
Ile Val Phe Arg Tyr Tyr His Lys Leu	Arg Met Ser Val Glu Tyr	
185	190	195
Ser Gln Ser Trp Gly His Phe Gln Asn	Arg Val Asn Leu Val Gly	
200	205	210
Asp Ile Phe Arg Asn Asp Gly Ser Ile	Met Leu Gln Gly Val Arg	
215	220	225
Glu Ser Asp Gly Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly Asn	
230	235	240
Leu Val Phe Lys Lys Thr Ile Val Leu	His Val Ser Pro Glu Glu	
245	250	255
Pro Arg Thr Leu Val Thr Pro Ala Ala	Leu Arg Pro Leu Val Leu	
260	265	270
Gly Gly Asn Gln Leu Val Ile Ile Val	Gly Ile Val Cys Ala Thr	
275	280	285
Ile Leu Leu Leu Pro Val Leu Ile Leu	Ile Val Lys Lys Thr Cys	
290	295	300
Gly Asn Lys Ser Ser Val Asn Ser Thr	Val Leu Val Lys Asn Thr	
305	310	315
Lys Lys Thr Asn Pro Glu Ile Lys Glu	Lys Pro Cys His Phe Glu	
320	325	330
Arg Cys Glu Gly Glu Lys His Ile Tyr	Ser Pro Ile Ile Val Arg	
335	340	345
Glu Val Ile Glu Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala Thr	
350	355	360
Tyr Met Thr Met His Pro Val Trp Pro	Ser Leu Arg Ser Asp Arg	
365	370	375
Asn Asn Ser Leu Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys Thr	
380	385	390
Gln Gln Ala Phe		

<210> 423

<211> 963

<212> DNA

<213> Homo sapiens

<400> 423

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ccatctcaca tgggtctacc ctactaaaga caggaagatc ataaactgac 100

agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150

ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcaccc cctcctgggtg gcgtgtgatg gctttgattc tgctgatcc 300
 gtgcgtgggg atggttgtcg ggctgggtgc tctggggatt tggctctgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaac aatcagaact 450
 aaagggcact ttcaaagtc ataatgcag cccctgtgac acaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcaciaa cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700
 gatgctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaa aaa 963

<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

Met	Gln	Asp	Glu	Asp	Gly	Tyr	Ile	Thr	Leu	Asn	Ile	Lys	Thr	Arg
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Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp
				20					25					30
Arg	Val	Met	Ala	Leu	Ile	Leu	Leu	Ile	Leu	Cys	Val	Gly	Met	Val
				35					40					45
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
				50					55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
				65					70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
				80					85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
				95					100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
				110					115					120
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140		145		150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155		160		165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170		175		180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185		190		195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200		205		210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215		220		225
Asp Gln Leu Pro					

<210> 425

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 425

tgacagccct gtgacacaaa ctgg 24

<210> 426

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 426

ctgagataac cgagccatcc tccac 26

<210> 427

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 427

gcttctctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgcctc cctgccca 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 432
 cagtgcac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 433
 ggccacctcc ttgagtcttc agttccct 28

 <210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 434
caactactgg ctaaagctgg tgaa 24

<210> 435
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 435
cctttctgta taggtgatac ccaatga 27

<210> 436
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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ggcagaaatg ggaggcaga 19

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tgctctgttg gctacggctt tagtcctag 30

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 aatacgaaca gtgcacgtg at 22

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 ctgaggaacc agccatgtct ct 22

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<210> 469
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 ctgccccttc agtgatgcca acctt 25

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 ggggtggaggc tcaactgagta ga 22

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 caatacaggt aatgaaactc tgcttcctt 28

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 <400> 477
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 tagacaggga ccatggcccg ca 22

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 <210> 490
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 <400> 490
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 <400> 491
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<210> 492
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<400> 492
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<210> 493
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<220>
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<400> 493
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<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
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cagcccgcgc gggagccgga ccgccgcggg aggcgctcgg acggcatgct 150
gagcccctc ctttgctgaa gcccgagtcg ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggg gaaccagag aggggcagca aaagaagcgg 300
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ccagggtctg ttgaattctt ctacagctcc ttcacccaaa agttcaaatt 1150
tgtcagtgac atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
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<210> 495

<211> 245

<212> PRT

<213> Homo Sapien

<400> 495

Met	Ala	Ala	Ala	Ile	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Gln	1	5	10	15
Ala	Arg	Glu	Arg	Glu	Lys	Ser	Asn	Ala	Cys	Lys	Cys	Val	Ser	Ser	20	25	30	35
Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val	35	40	45	50
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg	50	55	60	65
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser	65	70	75	80
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp	80	85	90	95
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile	95	100	105	110
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys	110	115	120	125
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu	125	130	135	140
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn	140	145	150	155
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Arg	Gln	Gln	Gln	Ser	Ser	155	160	165	170
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met	170	175	180	185
Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu	185	190	195	200
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His	200	205	210	215
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys	215	220	225	230

Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser
230 235 240

His Asn Glu Ser Thr
245

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<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

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gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatat 150
tgggggggatt tcagtgaaaa aagtggggga tccctccat tttagtgt 200
gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250
ccagtagggg tgggatgagc gaattatccc aaagctaaag tccacacccc 300
tgtagattac aagagtggtt ttggcaggag tgtgccccaa aatacagtgg 350
aaagggtgct gaagatat 500
aaaccacgtc ttgaaattt agtgggtctt 400
ggctttggga taggtgaagt gaggacagac actggagagg agggaaagg 450
gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500
cataggctgc tggatctggt ggagccagca ctggggccac ggggtgtaac 550
tggtctctgt ggaggggggt acgtgagggg ggggtctggg gcttatactc 600
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cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgctgc 700
cggtttgggg gtgtctctc ccggggcgct atggcgcgcg tggccagt 750
cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800
tgtcgcgcca gcggcgcggt gtccccgcg gcaccaagtc cctttgccag 850
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cgctctgct ctctaccgcc agcgtcggtc tggcggggcc tggtaacctg 1250

gcctggacaa ggagggccag gtcatgaagg gaaaccgagt taagaagacc 1300
 aaggcagctg cccactttct gcccaagctc ctggagggtg ccatgtacca 1350
 ggagccttct ctccacagtg tccccgaggc ccccccttcc agtccccctg 1400
 cccctgaaa tgtagtcctt ggactggagg ttccctgcac toccagttag 1450
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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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Arg	Glu	Pro	Gly	Gly	Ser	Arg	Pro	Val	Ser	Ala	Gln	Arg	Arg	Val
				20					25					30
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
				35					40					45
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro
				50					55					60
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
				65					70					75
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
				80					85					90
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
				95					100					105
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
				110					115					120
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
				125					130					135
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
				140					145					150
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
				155					160					165
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
				170					175					180
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
				185					190					195
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
				200					205					210
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
				215					220					225

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<211> 744

<212> DNA
<213> Homo Sapien

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gcaagaacgg cgggctctgc aacggcaacc tggtgatata cttctccaaa 150
gtgcgcctct tcggcctcaa gaagcgaggc ttgcggcgcc aagatcccca 200
gtctaaagggt atagtgaaca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctogatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400
accatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaattcta ctcatccatg ttgtacagac aacaggaatc 500
tggttagagcc tggtttttgg gattaataaa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
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taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499
<211> 247
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<213> Homo Sapien

<400> 499
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Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg
20 25 30
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
125 130 135

Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
140 145 150

Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
155 160 165

Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
170 175 180

Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
185 190 195

Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
200 205 210

Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
215 220 225

Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
230 235 240

Val Asn Lys Ser Lys Thr Thr
245

<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150

gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200

acacaggagg cattcaagaa tgaaataaac cagagttaga cccgcggggg 250

ttggtgtgtt ctgacataaa taaataatct taaagcagct gttcccctcc 300

ccaccccaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350

agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400

gatatatttg gaatgaaaag tttggggcct ttttagtaaa gtaagaacct 450

ggtgtggttg tgttttctt tctttttgaa ttcccccaca gaggagagga 500

aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550

gcagattgag gcattgattg ggggagagaa accagcagag cacagtgtga 600

tttgtgcta tgttgactaa aattgacgga taattgcagt tggatttttc 650

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<400> 501

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Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile	80	85	90	
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu	95	100	105	
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe	110	115	120	
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg	125	130	135	
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Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
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Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480

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Pro Met Pro Ala	Ile Glu His Glu His Leu Asn His Tyr Asn Ser	590	595	600
Tyr Lys Ser Pro	Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn	605	610	615
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<212> DNA

<213> Homo Sapien

<400> 502

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Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val
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Lys	Ala	Lys	Gly	Glu	Thr	Ala	Tyr	Leu	Pro	Cys	Lys	Phe	Thr	Leu	45
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Ser	Pro	Glu	Asp	Gln	Gly	Pro	Leu	Asp	Ile	Glu	Trp	Leu	Ile	Ser	60
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Pro	Ala	Asp	Asn	Gln	Lys	Val	Asp	Gln	Val	Ile	Ile	Leu	Tyr	Ser	75
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Gly	Asp	Lys	Ile	Tyr	Asp	Asp	Tyr	Tyr	Pro	Asp	Leu	Lys	Gly	Arg	90
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Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile	105
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Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu	

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 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150
 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagacc 300
 ttctgccttc ctttctgtgc gacagcctct caaatgcaga tggttgtgtc 350
 cccttgccctg ggttttaccg tgcttctctg gagccaggta tcagggggccc 400
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450
 cagaaactgt gggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtgccc ggctgctgca gcaggaggtt ctgcagaacg 550
 tctcggtatg tgagagctgt taccttgtcc acaccctgct ggagtcttac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650
 tctgaagtca ttctctaact tggccaacaa ctttgttctc atogtgtcac 700
 aactgaacc cagtcaagaa aatgagatgt tttccatcag agacagtga 750
 cacaggcggg ttctgtctatt ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaagccc ttgggggaagt ggacattctt ctgacctgga 850
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 tggcactggg ttgttcctcg tgtcatttca aacagtctcc ctctctatgc 950
 tgttctactg acacttcaag cccttgggcca tgggtcccat tcttgggcca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
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<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgtctg gtgaccaaga acctctctggc gttctacgtg gacagggtgt 300

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 taaactctat ctgctgaaag ggcctgcagg ccactcctgg agtaaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
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 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
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 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
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cacatacgat ttaggtgaca ctatagaata acatocactt tgcctttctc 150
tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgcccta 250
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gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccttg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcattg atttcagagg caacattttt ggatcacact 550
atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
tacgacgtct accactctcc tcagtatcac ttcttggtca gtctggggcg 650
ggcgaagaga gccttctcgc caggcatgaa cccaccccg tactcccaagt 700
tcctgtcccg gaggaacgag atccccctaa ttcacttcaa caccgccata 750
ccacggcgcc acaccgggag cgccgaggac gactcggagc gggacccctt 800
gaacgtgctg aagccccggg cccggatgac cccggcccg gcctcctgtt 850
cacaggagct ccgagcgcc gaggacaaca gccgatggc cagtgacca 900
ttaggggtgg tcagggcgcg tcgagtgaac acgcacgctg ggggaacggg 950
cccggaaggc tgcgccccct tcgccaagtt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
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Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	35	40	45
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	170	175	180
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	185	190	195
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	200	205	210
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	215	220	225
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	230	235	240
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					245	250	

<210> 512

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 512

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ctgctggggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150

gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200

ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250

ctcttcttagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgaagag agaccaggag ttccacaaa 350
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 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
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ggtgtccttg gactcacett ggcacatgtt ctgtgtttca gtaaagagag 1950
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gtggcccaaa aaaa 2015

<210> 513
<211> 482
<212> PRT
<213> Homo Sapien

<400> 513
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Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
20 25 30
Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
35 40 45
Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
50 55 60
Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
65 70 75
Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
80 85 90
Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
95 100 105
Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
110 115 120
Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
125 130 135
Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
140 145 150
Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
155 160 165
Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
170 175 180
Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
185 190 195
Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
200 205 210
Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
215 220 225
Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
230 235 240
Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	335	340	345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	380	385	390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	470	475	480
Gln Thr																	

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150

cttcttaaag caaactaaga ccagaggggg gattatcctt gacctttgaa 200

gaccaaact aaactgaaat ttaaatgtt ctctggggga gaaggagct 250

tgacttacac tttggaata atttgcttcc tgacactaag gctgtctgct 300
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 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

Met	Phe	Phe	Gly	Gly	Glu	Gly	Ser	Leu	Thr	Tyr	Thr	Leu	Val	Ile
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Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	200	210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	215	225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	230	240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	245	255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	260	270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	275	285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	290	300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	305	315
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	320	330
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	335	345
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	350	360
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	365	375
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	380	390
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	420
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					425	430

<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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<210> 517
 <211> 332
 <212> PRT
 <213> Homo Sapien

<400> 517
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 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
 20 25 30
 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys Gly Arg Val	Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu	80	85	90
Ile Val Thr Leu	Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr	95	100	105
Trp Cys Gly Val	Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile	110	115	120
Ser Leu Phe Val	Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser	125	130	135
Pro Thr Phe Gln	Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala	140	145	150
Lys Ala Gln Gln	Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu	155	160	165
Tyr Pro Ala Ala	Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu	170	175	180
Ala Pro Pro Leu	Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr	185	190	195
Ser Gln Tyr Thr	Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro	200	205	210
Ala Gly Ser Ser	Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala	215	220	225
Glu Asp Thr Ser	Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg	230	235	240
Val Ser Ile Pro	Met Val Arg Ile Leu Ala Pro Val Leu Val Leu	245	250	255
Leu Ser Leu Leu	Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His	260	265	270
Leu Leu Leu Trp	Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln	275	280	285
Arg Asn Glu Lys	Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys	290	295	300
Glu Ala Pro Ser	Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro	305	310	315
Pro Leu His Thr	Ser Glu Glu Glu Leu Gly Phe Ser Lys Phe Val	320	325	330

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

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<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggtg gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

gggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgacaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

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<223> Synthetic oligonucleotide probe

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<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe
<400> 524
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<210> 525
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tatccaatg cctcccaact gctc 24
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<223> Synthetic oligonucleotide probe
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 529
gaagcaagtg ccagctc 18
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<223> Synthetic oligonucleotide probe

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<223> Synthetic oligonucleotide probe

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<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 532

agtgttaagtc aagctccc 18